

The Amphipod Genus *Arcitalitrus* (Crustacea: Amphipoda: Talitridae) of New South Wales Forests, With Descriptions of Six New Species

R. PEART AND J.K. LOWRY*

Aquatic Zoology, Australian Museum, 6 College Street, Sydney NSW 2010, Australia
rachaelpcart@crustacea.net · jimlowry@crustacea.net

ABSTRACT. Until now, the genus *Arcitalitrus* has been restricted to three species, *Ar. bassianus* Friend, 1987, *Ar. dorrieni* (Hunt, 1925) and *Ar. sylvaticus* (Haswell, 1879). We redescribe the type species *Ar. sylvaticus* (Haswell, 1879) and describe six new species (*Ar. belbucca*, *Ar. bundeena*, *Ar. moonpar*, *Ar. nana*, *Ar. orara*, and *Ar. thora*) from New South Wales state forests and the Royal National Park, near Sydney.

PEART, R., & J.K. LOWRY, 2006. The amphipod genus *Arcitalitrus* (Crustacea: Amphipoda: Talitridae) of New South Wales forests, with descriptions of six new species. *Records of the Australian Museum* 58(1): 97–118.

Including this paper, 32 species of terrestrial Talitridae (landhoppers) are described from Australia (Haswell, 1879; Bousfield, 1976; Friend, 1979, 1982, 1987). Most species are known from Tasmania (Friend, 1979, 1987). Apart from introduced terrestrial species, the New South Wales fauna appears to be restricted to species of *Arcitalitrus* and *Agilestia* and species of the former apparently dominate the amphipod component of the forest floor community. Including the new taxa described here, 12 species of talitrids are known from New South Wales: *Arcitalitrus belbucca* n.sp., *Ar. bundeena* n.sp., *Ar. dorrieni* (Hunt, 1925), *Ar. moonpar* n.sp., *Ar. nana* n.sp., *Ar. orara* n.sp., *Ar. sylvaticus* (Haswell, 1879), *Ar. thora* n.sp., *Agilestia hylaea* Friend, 1982, *Parorchestia gowerensis* Bousfield, 1976, from Lord Howe Island, and the introduced species *Talitroides alluaudi* (Chevreux, 1901) and *T. topitotum* (Burt, 1934).

Hurley (1975) established the subgenus *Talitrus* (*Arcitalitrus*) for *T. sylvaticus* Haswell, 1879, a terrestrial species originally known from Rooty Hill, just west of Sydney, New South Wales. Friend (1987) elevated the subgenus to generic status and included two additional

species, *Arcitalitrus dorrieni* (Hunt, 1925) from Blackheath, New South Wales and *Ar. bassianus* Friend, 1987, from Victoria and northwestern Tasmania. The type species, *Ar. sylvaticus* (Haswell, 1879) has never been precisely described. In this paper, we redescribe *Ar. sylvaticus* based on new collections from the type locality and establish a neotype to distinguish it from other closely related species.

Arcitalitrus appears to have two groups. The “Sylvaticus” species group is defined by gill 6 that has a convoluted anterior margin and a subapically incised posterior margin and the rami of pleopod 3 that are subequal in length to the peduncle. This group contains *Ar. bassianus*, *Ar. belbucca*, *Ar. nana*, *Ar. orara*, and *Ar. sylvaticus*. The “Dorrieni” species group contains *Ar. dorrieni* and *Ar. moonpar* and is defined by epimeron 2 that is longer than epimeron 3, a subquadrate posteroventral corner on epimeron 3 and an entire telson. The long epimeron 2 and the subquadrate corner of epimeron 3 are homoplastic characters that also occur in *Ar. bassianus*. *Arcitalitrus bundeena* and *Ar. thora* apparently belong in neither group. Neither species has the characters that define the “Sylvaticus” and “Dorrieni” species groups.

* author for correspondence

The taxonomic descriptions and diagnoses presented in this paper were generated from a DELTA (Dallwitz *et al.*, 1993) database of Australian talitrid amphipod species. Each species is diagnosed against all other species in the genus *Arcitalitrus*. Bold phrases in the descriptions indicate diagnostic characters. Material included in this study is lodged in the Australian Museum, Sydney (AM), the Natural History Museum, London, (BMNH) and the National Museums of Canada, Ottawa (NMC). The following abbreviations are used on the plates: *A*, antenna; *EP*, epimeron; *gi*, gill; *G*, gnathopod; *LL*, lower lip; *MD*, mandible; *MP*, maxilliped; *MX*, maxilla; *O*, oostegite; *P*, pereopod; *PL*, pleopod; *T*, telson; *UL*, upper lip; *U*, uropod; *l*, left; *r*, right.

Key to the species of the genus *Arcitalitrus*

- 1 Epimeron 3 posteroventral margin serrulate *Arcitalitrus bassianus*
 — Epimeron 3 posteroventral margin smooth 2
- 2 Epimeron 2 subequal in length to epimeron 3 3
 — Epimeron 2 longer than epimeron 3 6
- 3 Gill 6 anterior margin convoluted, subapically incised 4
 — Gill 6 posterior margin convoluted, apically incised *Arcitalitrus thora*
- 4 Pleopod 3 rami absent 5
 — Pleopod 3 uniramous *Arcitalitrus nana*
- 5 Telson entire *Arcitalitrus orara*
 — Telson apically incised *Arcitalitrus sylvaticus*
 — Telson deeply incised *Arcitalitrus belbuca*
- 6 Epimeron 3 posteroventral corner with subacute tooth *Arcitalitrus bundeena*
 — Epimeron 3 posteroventral corner rounded *Arcitalitrus moonpar*
 — Epimeron 3 posteroventral corner subquadrate *Arcitalitrus dorrieni*

Arcitalitrus bassianus Friend

Talitrus sylvaticus.—Chevreux, 1901: 392, fig. 7.

Arcitalitrus bassianus Friend, 1987: 35, figs 30–35.

Type material. HOLOTYPE, ♀ AM P37350, 10 February 1979, J.A. Friend. PARATYPES, male AM P37351; 3 ♀ ♀, 1 juvenile AM P37352; 1 ♂, 2 ♀ ♀, 1 juvenile BMNH; 1 ♂, 2 ♀ ♀, 1 juvenile NMC. Paratypes are all from type locality.

Type locality. 1.5 km NNE of Kate's Point, Robbins Island, northwestern Tasmania (40°40'S 144°55'E), in swampy area beside creek.

Description. *Body* shape laterally compressed; cuticle calcification absent. *Eye* medium ($\frac{1}{5}$ – $\frac{1}{3}$ head length). *Antenna* 2 longer than head and first 3 pereonites; peduncular articles narrow. *Mandible* left lacinia mobilis 4 dentate. ***Maxilliped outer plate distally acute/arcuate***; palp dactylus present and distinct. *Pereonite 1* sternite without papillose process. *Gnathopod 1* not sexually dimorphic; simple; merus and carpus not expanded; propodus subrectangular; palm absent; dactylus longer than palm. *Gnathopod 2* not sexually dimorphic; chelate; basis narrow; merus and carpus expanded posteriorly; propodus "mitten-like"; palm obtuse; smooth; dactylus shorter than palm. *Pereopods 3–7* long ($\frac{1}{2}$ length of body); simplidactylate.

Taxonomy

Arcitalitrus Hurley

Arcitalitrus Hurley, 1975: 161.—Friend, 1987: 35.

Type species. *Talitrus sylvaticus* Haswell, 1879, original designation.

Diagnosis. Gnathopod 2 not sexually dimorphic. Maxilliped outer plate distally acute/arcuate. Pleopods 1 and 2 well developed, pleopod 3 reduced.

Species composition. *Arcitalitrus* contains nine species: *Ar. bassianus* Friend, 1987; *Ar. belbuca* n.sp.; *Ar. bundeena* n.sp.; *Ar. dorrieni* (Hunt, 1925); *Ar. moonpar* n.sp.; *Ar. nana* n.sp.; *Ar. orara* n.sp.; *Ar. sylvaticus* (Haswell, 1879); *Ar. thora* n.sp.

Pereopod 4 carpus similar in length to pereopod 3 carpus, dactylus similar to pereopod 3 dactylus. *Pereopod 7* basis posterodistal lobe present. *Gill 2* lobate, not incised. *Gills 3–5* lobate, smaller than gills 2 and 6. ***Gill 6*** lobate, anterior margin convoluted, ***subapically incised along posterior margin***. *Oostegites* long (length greater than 2× width), weakly setose, setae with simple smooth tips. *Epimera 1* to 3 not convergent. *Epimeron 2* longer than epimeron 3. ***Epimeron 3 posteroventral margin serrulate***, posteroventral corner subquadrate. *Pleopod 1* well developed, biramous, rami subequal in length to peduncle; inner ramus with 5 articles; outer ramus with 9 articles. ***Pleopod 2 reduced***, biramous, rami shorter than peduncle; inner ramus with 4 articles, inner ramus with 1–5 articles; outer ramus with 6 articles. *Pleopod 3* reduced, biramous, rami shorter than peduncle; inner ramus with 2 articles; outer ramus with 5 articles. *Uropod 1* not sexually dimorphic; peduncle with 3 robust setae on peduncle; inner ramus subequal in length to outer ramus, with 3 robust setae on the margins, with 3 apical robust setae; outer ramus without marginal robust setae, with 3 apical robust setae. *Uropod 2* not sexually dimorphic; peduncle with 3 robust setae; inner ramus subequal in length to outer ramus, with 2 marginal robust setae, 5 apical robust setae; outer ramus without marginal robust setae, with 2 apical robust setae. *Uropod 3* peduncle with 1 robust seta; ramus shorter than peduncle, ramus linear

(narrowing), with 2 robust setae. *Telson* as broad as long, apically incised, with marginal and apical robust setae, with 3–5 robust setae per lobe.

Habitat. Leaf and log litter, in bracken, under stones, swampy ground, wet sclerophyll, eucalyptus regrowth.

Remarks. *Arcitalitrus bassianus* is a member of the “Sylvaticus” species group and is the only Australian landhopper found on both mainland Australia and Tasmania. It differs from other species in the group in having a long epimeron 2, a subquadrate corner on epimeron 3, reduced numbers of articles on the inner ramus of pleopod 2 and a biramous pleopod 3. It is similar to *Ar. belbuca* and *Ar. nana* in having 6–10 articles on the outer ramus of pleopod 2. *Arcitalitrus bassianus* and *Ar. sylvaticus* both have subequal rami on uropod 1 and an apically incised telson.

Distribution. Tasmania: Teatree swamp near Togari; King and Robbins Islands (Friend, 1987). Victoria: Mount Donna Buang; Marysville; Cement Creek; Nelson; Lake Purrumbete; Snobs Creek (Friend, 1987).

Arcitalitrus belbuca n.sp.

Figs. 1, 8–10

Type material. HOLOTYPE, ♀, 14.0 mm, AM P60959, 11 November 1999, M. Gray, G. Milledge and H. Smith. PARATYPES, 65 specimens AM P60967. Paratypes are all from the type locality.

Type locality. Belbuca Road, 1.5 km from junction with Middle Ridge Road, Irishman State Forest (30°32'58"S 152°40'14"E), west of Sydney, New South Wales, Australia.

Description. Based on holotype female. *Body shape* normally laterally compressed; cuticle calcification absent. *Eye* medium ($\frac{1}{5}$ – $\frac{1}{3}$ head length). *Antenna 2* longer than head and first 3 pereonites; peduncular articles narrow. *Mandible* left lacinia mobilis 4 dentate, or 5 dentate. *Maxilliped* outer plate distally acute/arcuate; palp dactylus present and distinct. *Pereonite 1* sternite without papillose process. *Gnathopod 1* not sexually dimorphic; simple; merus and carpus not expanded; propodus subrectangular;

palm absent; dactylus longer than palm. *Gnathopod 2* not sexually dimorphic; chelate; basis narrow; merus and carpus expanded posteriorly; propodus “mitten-like”; palm obtuse; smooth; dactylus shorter than palm. *Pereopods 3–7* long ($\frac{1}{2}$ length of body); simplidactylate. *Pereopod 4* carpus similar in length to pereopod 3 carpus, dactylus similar to pereopod 3 dactylus. *Pereopod 7* posterodistal lobe present. Gill 2 lobate, not incised. *Gills 3–5* lobate, smaller than gills 2 and 6. *Gill 6* lobate, anterior margin convoluted, subapically incised along posterior margin. *Oostegites* long (length greater than 2× width), *weakly setose*, setae with simple smooth tips. *Epimera 1 to 3* not convergent. *Epimeron 2* subequal in length to epimeron 3. *Epimeron 3* posteroventral margin smooth, posteroventral corner with small subacute tooth. *Pleopod 1* well developed, biramous, rami subequal in length to peduncle; inner ramus with 13 articles; outer ramus with 9 articles. *Pleopod 2* well developed, biramous, *rami subequal in length to peduncle*; inner ramus with 8 articles; outer ramus with 7 articles. *Pleopod 3* reduced, rami absent. *Uropod 1* not sexually dimorphic; peduncle with 8 robust setae on peduncle; inner ramus shorter than outer ramus, with 3 robust setae on the margins, with 5 apical robust setae; outer ramus without marginal robust setae, with 3 apical robust setae. *Uropod 2* not sexually dimorphic; peduncle with 3 robust setae; inner ramus subequal in length to outer ramus, with 2 marginal robust setae, 4 apical robust setae; outer ramus without marginal robust setae, with 4 apical robust setae. *Uropod 3* peduncle with 1 robust setae; ramus shorter than peduncle, ramus linear (narrowing), with 2 robust setae. *Telson* longer than broad, *deeply incised*, with marginal and apical robust setae, with more than 10 robust setae on whole telson.

Etymology. Named after Belbuca Road, in Irishman State Forest, the type locality and treated as a noun in apposition.

Remarks. *Arcitalitrus belbuca* is a member of the “Sylvaticus” species group. It is the only *Arcitalitrus* with a deeply incised telson. *Arcitalitrus belbuca* and *Ar. nana* appear to be sister taxa. They share many characters and both have more than 10 dorsal robust setae on the telson.

Distribution. New South Wales: Irishman State Forest, west of Sydney.

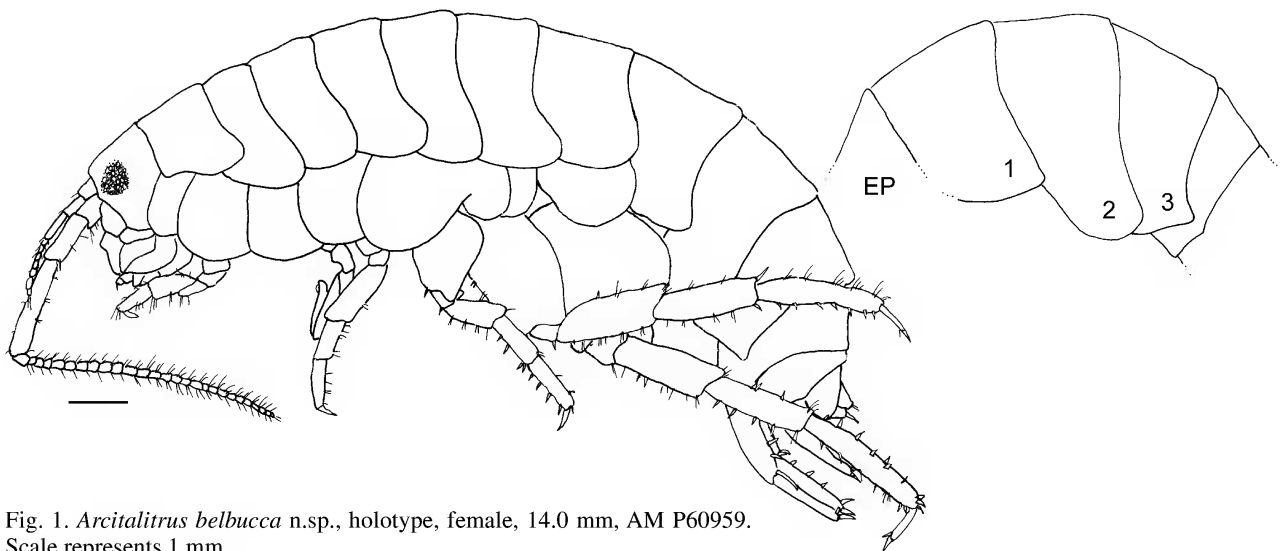


Fig. 1. *Arcitalitrus belbuca* n.sp., holotype, female, 14.0 mm, AM P60959. Scale represents 1 mm.

Arcitalitrus bundeena n.sp.

Figs. 2, 11–14

Type material. HOLOTYPE, ♀, 15 mm, AM P60957, December 1999, M. Gray, G. Milledge and H. Smith. PARATYPES, many specimens, AM P60958. Paratypes are all from the type locality.

Type locality. Beside the Hacking River, Lady Wakehurst Drive, Royal National Park (34°9'47"S 151°0'55"E), New South Wales, Australia.

Other material examined. New South Wales, Australia: near locked gate, Fire road No. 95 Junction with Darkes Forest Road (34°11.820'S 150°54.600'E), 2 specimens, 8 December 1999, found in leaf litter, M. Gray, G. Milledge and H. Smith; Fire road No. 9, Woronora Dam catchment (34°11'53"S 150°54'32"E), many specimens, 8–22 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; Fire road No. 9, east of Bee Creek, Woronora Dam catchment (34°08'53"S 150°55'37"E), 10 specimens, 8–22 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; 0.1 km northwest of Southern Freeway Overpass, Princes Highway, Woronora Dam catchment (34°11'31"S 150°57'58"E), 11 specimens, 8–22 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith.

Description. Based on holotype female. *Body* shape normally laterally compressed; cuticle calcification absent. *Eye* large (greater than 1/3 head length). *Antenna* 2 longer than head and first 3 pereonites; peduncular articles narrow. *Mandible* left lacinia mobilis 4 dentate. *Maxilliped* outer plate distally acute/arcuate; palp dactylus present and distinct. *Pereonite 1* sternite without papillose process. *Gnathopod 1* not sexually dimorphic; simple; merus and carpus not expanded; propodus subrectangular; palm absent; dactylus longer than palm. *Gnathopod 2* not sexually dimorphic; chelate; narrow; merus and carpus expanded posteriorly; propodus "mitten-like"; palm obtuse; smooth; dactylus shorter than palm. *Pereopods 3–7* long (1/2 length of body); simplidactylate. *Pereopod 4* carpus similar in length to pereopod 3 carpus, dactylus similar to pereopod 3

dactylus. *Pereopod 7* posterodistal lobe present. *Gill 2* lobate, not incised. *Gills 3–5* lobate, smaller than gills 2 and 6. *Gill 6* lobate, **anterior and posterior margins smooth, apically incised**. *Oostegites* long (length greater than 2× width), strongly setose, setae with simple smooth tips. *Epimera 1 to 3* not convergent. *Epimeron 2* longer than epimeron 3. *Epimeron 3* posteroventral margin smooth, posteroventral corner with small subacute tooth. *Pleopod 1* well developed, biramous, rami shorter than peduncle; inner ramus with 11 articles; outer ramus with 11 articles, outer ramus with more than 10 articles. **Pleopod 2** well developed, biramous, **rami subequal in length to peduncle**; inner ramus with 12 articles, **inner ramus with more than 10 articles**; outer ramus with 12 articles. *Pleopod 3* reduced, uniramous, rami shorter than peduncle; inner ramus with 1 articles; outer ramus without articles. *Uropod 1* not sexually dimorphic; peduncle with 5 robust setae on peduncle; inner ramus subequal in length to outer ramus, with 4 robust setae on the margins, with 4 apical robust setae; outer ramus without marginal robust setae, with 4 apical robust setae. *Uropod 2* not sexually dimorphic; peduncle with 4 robust setae; inner ramus subequal in length to outer ramus, with 3 marginal robust setae, 4 apical robust setae; outer ramus without marginal robust setae, with 4 apical robust setae. *Uropod 3* peduncle with 1 robust setae; ramus shorter than peduncle, ramus linear (narrowing), with 2 robust setae. *Telson* longer than broad, incised to half the length, with marginal and apical robust setae, with 3–5 robust setae per lobe.

Etymology. Named after the town Bundeena, located on the edge of the Royal National Park, near the type locality, and treated as a noun in apposition.

Remarks. *Arcitalitrus bundeena* appears to be isolated from other *Arcitalitrus* species. It is excluded from the "Sylvaticus" species group because it has smooth anterior and posterior margins on gill 6 without an apically incised posterior margin, and the rami of pleopod 1 are shorter than the peduncle. It is excluded from the "Dorrieni" species group because of the small posteroventral cusp on epimeron 3. It is excluded from both groups by the large number of articles in the outer ramus of pleopod 2 and the large number of robust setae on the inner ramus of uropod 2. *Arcitalitrus bundeena* differs from all species in the genus, except *Ar. nana*, in having the telson incised about halfway.

Distribution. New South Wales: Royal National Park; Woronora Dam catchment.

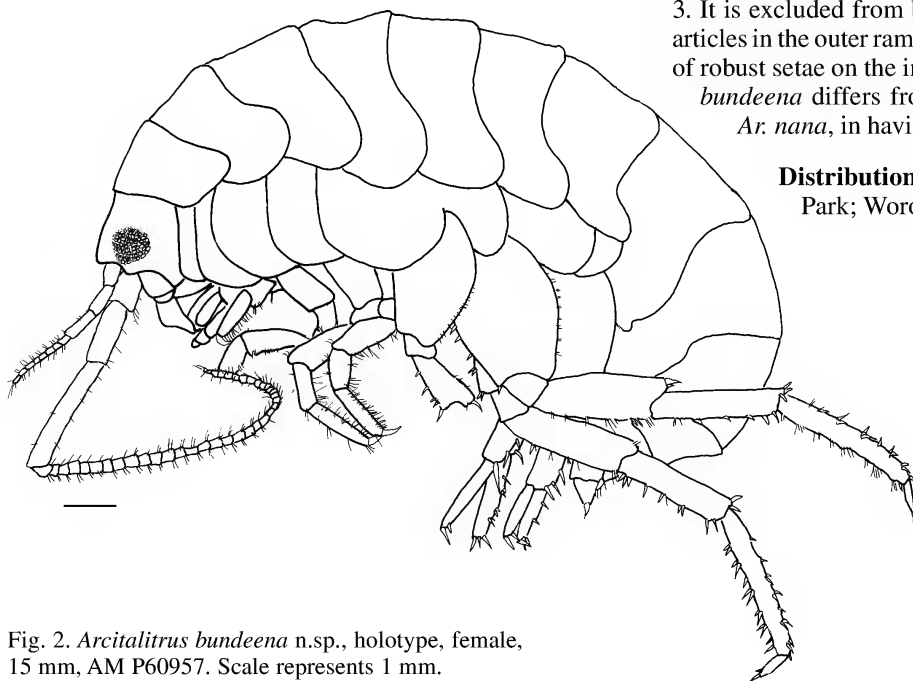


Fig. 2. *Arcitalitrus bundeena* n.sp., holotype, female, 15 mm, AM P60957. Scale represents 1 mm.

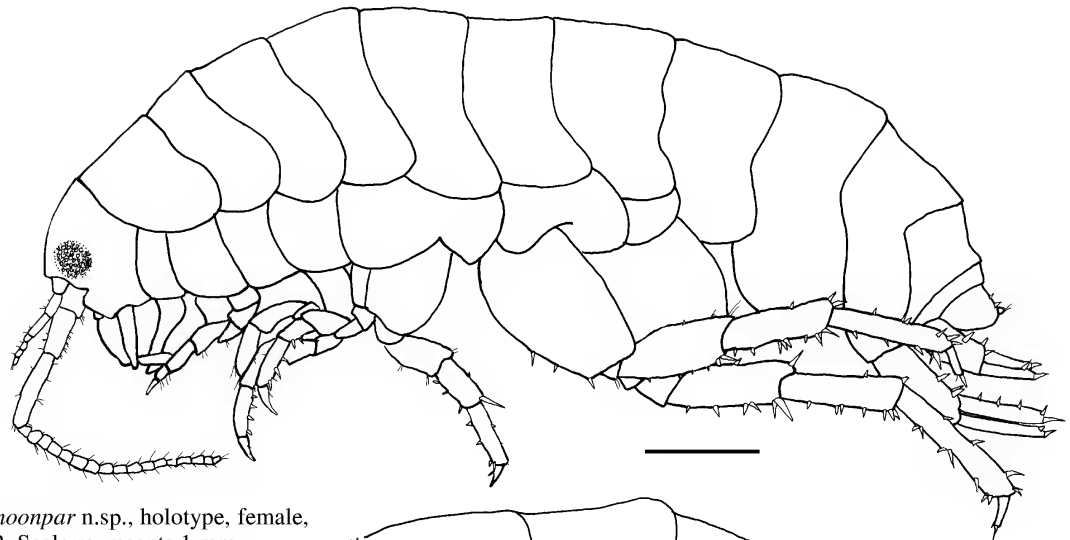


Fig. 3. *Arcitalitrus moonpar* n.sp., holotype, female, 9.0 mm, AM P60962. Scale represents 1 mm.

Arcitalitrus dorrieni (Hunt)

Talitrus dorrieni Hunt, 1925: 854, figs 1–2.—Rawlinson, 1937: 589.
Talitroides dorrieni.—Schellenberg, 1934: 159; Reid, 1947: 19, fig. 10.
Talitrus sylvaticus.—Hurley, 1975: 160 (in part).
Arcitalitrus dorrieni.—Bousfield, 1984: 206, table 7; Friend, 1987: 38.

Type material. Hunt (1925) based his original description on seven specimens, two males, four females and one juvenile. He described and illustrated one of the adult males, a specimen 13 mm in length; partially described and made a habitus illustration of one adult female, a specimen 15 mm in length, and partially described the immature specimen. All of this material should be considered as a syntype series, the whereabouts of which is unknown.

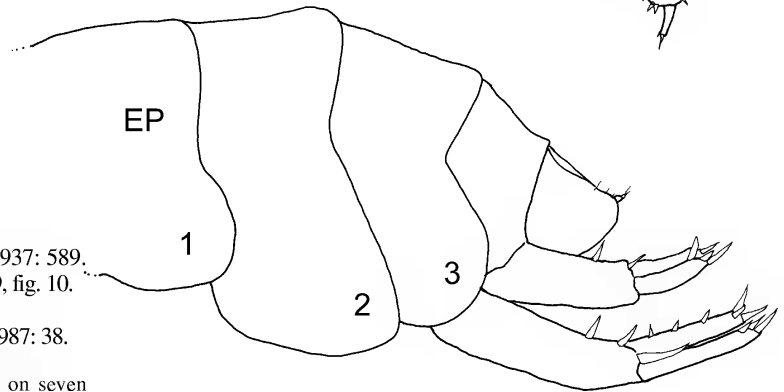
Type locality. Among moist humus and under dead leaves in the gardens of Tresco Abbey, Scilly Isles, Great Britain.

Diagnosis. Gill 6 apically incised. Pleopod 3 rami absent. Uropod 3 peduncle with 2 robust setae. Telson entire, with more than 10 robust setae.

Remarks. *Arcitalitrus dorrieni* was in synonymy with *Ar. sylvaticus* until Bousfield (1984) resurrected it as a valid species. Friend (1987) distinguished it from *Ar. sylvaticus* by gill 6 that is strongly cleft in *Ar. dorrieni*. This species was originally described from the Scilly Isles, but is apparently native to New South Wales, where it is known from Blackheath, in the Blue Mountains (Schellenberg, 1934). Material from Cambewarra Mountain, near Nowra, in the collections of the Australian Museum was identified as *Ar. dorrieni* by Dr A. Friend. *Arcitalitrus dorrieni* does not occur in any areas studied during this project.

Arcitalitrus dorrieni differs from the only other species in the “Dorrieni” species group in having strongly setose oostegites, a subquadrate posteroventral corner on epimeron 3, more than 5 articles on the rami of pleopods 1 and 2, no rami on pleopod 3 and more than 10 dorsal robust setae on the telson.

Distribution. New South Wales: Blackheath, Blue Mountains (Schellenberg, 1934); Cambewarra Mountain, near Nowra (AM).



Arcitalitrus moonpar n.sp.

Figs. 3, 15–17

Type material. HOLOTYPE, ♀, 9.0 mm, AM P60962, December 1999, M. Gray, G. Milledge and H. Smith. PARATYPES, 30 specimens AM P60963. Paratypes are all from the type locality.

Type locality. Three km southwest of Mangrove Mountain (33°22'28"S 151°15'39"E), New South Wales.

Other material examined. New South Wales, Australia: end of Darkes Forest, Woronora Dam Catchment (34°12'51"S 150°54'E), 8 specimens, 8–22 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; junction of Urumbilum Creek road and Loudens road, Orara State Forest (30°19'35"S 152°55'00"E), 3 specimens, 9–23 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; end of Little North Arm road, west bank of Rosewood River, Dorrigo National Park (30°24'06"S 152°46'18"E), 35 specimens, 10–24 November 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; beside Hacking River, Lady Wakehurst Drive, Royal National Park (34°09'47"S 151°00'55"E), 40 specimens, 6–20 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; junction of Moonpar and Mills roads, Moonpar State Forest (30°14'36"S 152°37'32"E), 15 specimens, 9–23 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; 2 km south southwest of Bostobrick, Christophersons Mountain (30°17'45"S 152°37'04"E), 55 specimens, 9–23 November 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; nearly 0.3 km east of Artillery Hill, Sir Bertram Stevens Drive, Royal National Park (34°04'55"S 151°03'40"E), 1 specimen, 6–20 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; Horseshoe road, 3.5 km southeast of Thora, Scotchman State Forest (30°26'25"S 152°47'30"E), 1 specimen, 10–24 November 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith.

Description. Based on holotype female. *Body* shape normally laterally compressed. Cuticle calcification absent. *Eye* medium ($\frac{1}{5}$ – $\frac{1}{3}$ head length). *Antenna* 2 longer than head and first 3 pereonites; peduncular articles narrow. *Mandible* left lacinia mobilis 4 dentate. *Maxilliped* outer plate distally acute/arcuate; palp dactylus present and distinct. *Pereonite 1* sternite without papillose process. *Gnathopod 1* not sexually dimorphic; simple; merus and carpus not expanded; propodus subrectangular; palm absent; dactylus longer than palm. *Gnathopod 2* not sexually dimorphic; chelate; narrow; merus and carpus expanded posteriorly; propodus “mitten-like”; palm obtuse; smooth; dactylus shorter than palm. *Pereopods 3–7* long ($\frac{1}{2}$ length of body); simplidactylate. *Pereopod 4* carpus similar in length to pereopod 3 carpus, dactylus similar to pereopod 3 dactylus. *Pereopod 7* posterodistal lobe present. *Gill 2* lobate, not incised. *Gills 3–5* lobate, smaller than gills 2 and 6. *Gill 6* lobate, anterior and posterior margins smooth, apically incised. *Oostegites* long (length greater than $2\times$ width), *weakly setose*, setae with simple smooth tips. *Epimera 1 to 3* not convergent. *Epimeron 2* longer than epimeron 3. *Epimeron 3* posteroventral margin smooth, *posteroventral corner rounded*. *Pleopod 1* well developed, biramous, rami shorter than peduncle; inner ramus with 6 articles; outer ramus with 5 articles, outer ramus with 1–5 articles. *Pleopod 2* well developed, biramous, rami shorter than peduncle; inner ramus with 5 articles, inner ramus with 1–5 articles; outer ramus with 4 articles. *Pleopod 3* reduced, uniramous, rami shorter than peduncle; inner ramus with 1 article; outer ramus without articles. *Uropod 1* not sexually dimorphic; peduncle with 4 robust setae on peduncle; inner ramus shorter than outer ramus, with 3 robust setae on the margins, with 4 apical robust setae; *outer ramus* without marginal robust setae, *with 2 apical robust setae*. *Uropod 2* not sexually dimorphic; peduncle with 3 robust setae; inner ramus subequal in length to outer ramus, with 1 marginal robust seta, 5 apical robust setae; outer ramus without marginal robust setae, with 4 apical robust setae. *Uropod 3* peduncle with 1 robust seta; ramus shorter than peduncle, ramus bud-like (broad), with 2 robust setae. *Telson* as broad as long, entire, with marginal and apical robust setae, with 3–5 robust setae per lobe.

Etymology. Named after Moonpar State Forest, within the range of *Ar. moonpar* and treated as a noun in apposition.

Habitat. Forest floor leaf-litter.

Remarks. *Arcitalitrus moonpar* is a member of the “Dorrieni” species group. It differs from the only other species in the group, *Ar. dorrieni*, in having weakly setose oostegites, a rounded posteroventral corner on epimeron 3, a reduced number of articles on the outer ramus of pleopod 1 and both rami of pleopod 2, a uniramous pleopod 3 and 8 (6 to 10) dorsal robust setae on the telson.

Distribution. New South Wales: southwest of Mangrove Mountain; on the shores of the Hacking River, Royal National Park; Woronora Dam Catchment; Orara State Forest; Dorrigo National Park; Moonpar State Forest; Christophersons Mountain; Scotchman State Forest.

Arcitalitrus nana n.sp.

Figs. 4, 18–20

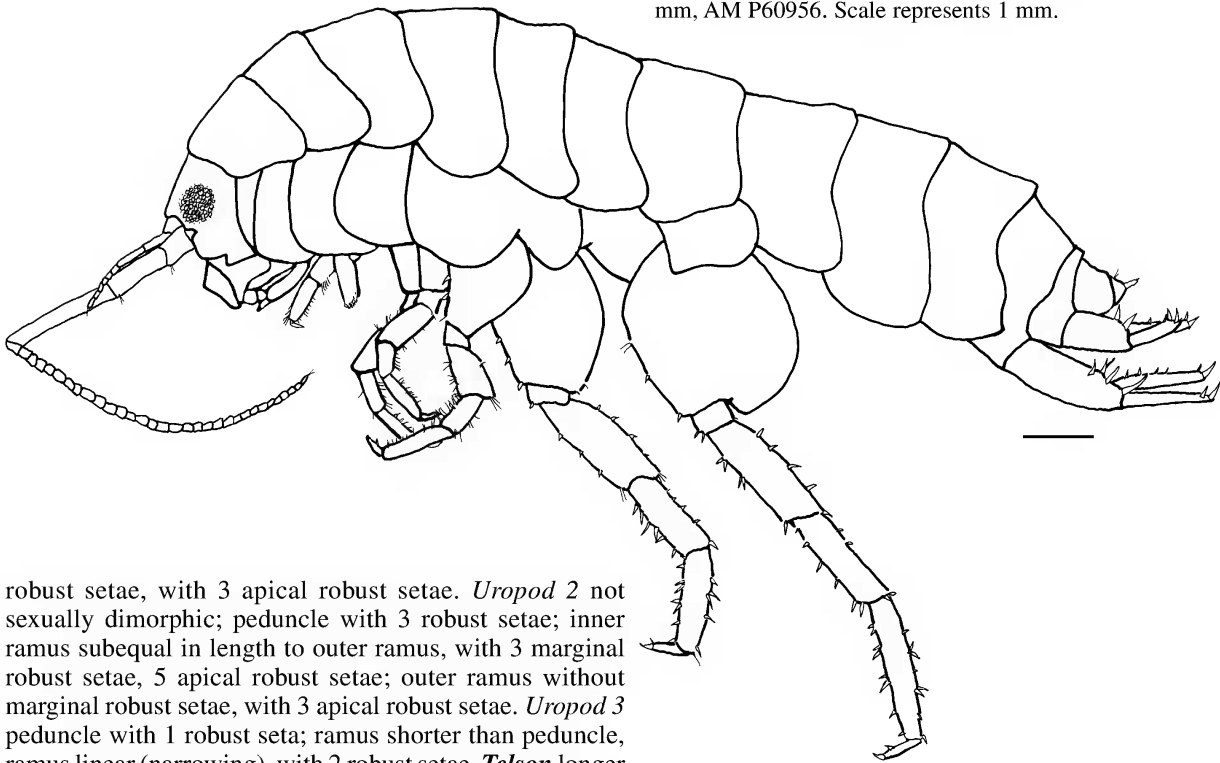
Type material. HOLOTYPE, ♀, 15.0 mm, AM P60956, December, 1999, M. Gray, G. Milledge and H. Smith. PARATYPES, male AM P60955; 35 specimens, AM P60964. Paratypes are all from the type locality.

Type locality. Five km ENE of Lowanna, Nana Creek State Forest (30°11'51"S 152°56'53"E) New South Wales.

Other material examined. New South Wales, Australia: Junction of Urumbilum Creek road and Loudens road, Orara State Forest (30°19'35"S 152°55'00"E), 5 specimens, 9–23 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; nearly 2 km east of Mount Kariong, Brisbane Water National Park (33°27'50"S 151°17'04"E), 40 specimens, 1–15 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; end of Little North Arm road, west bank of Rosewood River, Dorrigo National Park (30°24'06"S 152°46'18"E), 25 specimens, 10–24 November 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; Reids Creek road, Gladstone State Forest (30°31'01"S 152°48'29"E), 20 specimens, 12–25 November 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; beside Hacking River, Lady Wakehurst Drive, Royal National Park (34°09'47"S 151°00'55"E), 35 specimens, 6–20 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; approximately 0.3 km east of Artillery Hill, Sir Bertram Stevens Drive, Royal National Park (34°04'55"S 151°03'40"E), 28 specimens, 6–20 December 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith; 3 km northwest of Caledonia Knob, Bagawa State Forest (30°08'44"S 152°55'47"E), 37 specimens, 10–23 November 1999, collected from pitfall traps, M. Gray, G. Milledge and H. Smith.

Description. Based on holotype female. *Body* shape normally laterally compressed; cuticle calcification absent. *Eye* large (greater than $\frac{1}{3}$ head length). *Antenna* 2 longer than head and first 3 pereonites; peduncular articles narrow. *Mandible* left lacinia mobilis 4 dentate. *Maxilliped* outer plate distally acute/arcuate; palp dactylus present and distinct. *Pereonite 1* sternite without papillose process. *Gnathopod 1* not sexually dimorphic; simple; merus and carpus not expanded; propodus subrectangular; palm absent; dactylus longer than palm. *Gnathopod 2* not sexually dimorphic; chelate; narrow; merus and carpus expanded posteriorly; propodus “mitten-like”; palm obtuse; smooth; dactylus shorter than palm. *Pereopods 3–7* long ($\frac{1}{2}$ length of body); simplidactylate. *Pereopod 4* carpus similar in length to pereopod 3 carpus, dactylus similar to pereopod 3 dactylus. *Pereopod 7* posterodistal lobe present. *Gill 2* lobate, not incised. *Gills 3–5* lobate, smaller than gills 2 and 6. *Gill 6* lobate, *anterior margin convoluted, subapically incised along posterior margin*. *Oostegites* long (length greater than $2\times$ width), weakly setose, setae with simple smooth tips. *Epimera 1 to 3* not convergent. *Epimeron 2* subequal in length to epimeron 3. *Epimeron 3* posteroventral margin smooth, posteroventral corner with small subacute tooth. *Pleopod 1* well developed, biramous, rami subequal in length to peduncle; inner ramus with 13 articles; outer ramus with 11 articles, *outer ramus with more than 10 articles*. *Pleopod 2* well developed, biramous, rami shorter than peduncle; inner ramus with 8 articles; outer ramus with 6 articles. *Pleopod 3* reduced, uniramous, rami shorter than peduncle; inner ramus with 1 article; outer ramus without articles. *Uropod 1* not sexually dimorphic; peduncle with 4 robust setae on peduncle; inner ramus shorter than outer ramus, with 4 robust setae on the margins, with 4 apical robust setae; outer ramus without marginal

Fig. 4. *Arcitalitrus nana* n.sp., holotype, female, 15.0 mm, AM P60956. Scale represents 1 mm.



robust setae, with 3 apical robust setae. *Uropod 2* not sexually dimorphic; peduncle with 3 robust setae; inner ramus subequal in length to outer ramus, with 3 marginal robust setae, 5 apical robust setae; outer ramus without marginal robust setae, with 3 apical robust setae. *Uropod 3* peduncle with 1 robust seta; ramus shorter than peduncle, ramus linear (narrowing), with 2 robust setae. *Telson* longer than broad, *incised to half the length*, with marginal and apical robust setae, with more than 10 robust setae.

Etymology. Named for Nana Creek State Forest, the type locality and treated as a noun in apposition.

Habitat. Forest floor leaf-litter.

Remarks. *Arcitalitrus nana* is a member of the “sylvaticus” species group. It differs from other species in the group in having a uniramous pleopod 3, in having 3–5 marginal robust setae on the inner ramus of uropod 2 and in having the telson incised halfway. *Arcitalitrus nana* and *Ar. orara* both have large eyes. *Arcitalitrus nana* and *Ar. belbucca* both have more than 10 dorsal robust setae on the telson and both species, plus *Ar. orara*, have the inner ramus of uropod 1 shorter than the outer. *Arcitalitrus nana* and *Ar. belbucca* and *Ar. bassianus* all have pleopod 2 outer ramus with 6–10 articles.

Distribution. New South Wales: Lowanna, Nana Creek State Forest; Caledonia Knob, Bagawa Creek State Forest; Orara State Forest; Brisbane Water National Park; Dorrigo National Park; Gladstone State Forest; Royal National Park.

Arcitalitrus orara n.sp.

Figs. 5, 21–23

Type material. HOLOTYPE, ♀, 11.0 mm, AM P60954, December 1999, M. Gray, G. Milledge and H. Smith. PARATYPES, ♀ AM P60953; 3 specimens, AM P60952. Paratypes are all from the type locality.

Type locality. Junction of Urumbilum Creek road and Loudens road, Orara State Forest (30°19'35"S 152°55'00"E), New South Wales.

Other material examined. New South Wales, Australia: approximately 1.2 km south of Killiekrankie Mountain, Horseshoe road, Oakes State Forest (30°30'10"S 152°32'15"E), 7 specimens, 11–24 November 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; America Bay Track, Kuring-gai Chase National Park (33°36'10"S 151°16'16"E), 10 specimens, 2–16 December 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; nearly 2 km east of Mount Kariong, Brisbane Water National Park (33°27'50"S 151°17'04"E), 42 specimens, 1–15 December 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; end of Little North Arm road, west bank of Rosewood River, Dorrigo National Park (30°24'06"S 152°46'18"E), 35 specimens, 10–24 November 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; Rickersby road, Gladstone State Forest (30°32'46"S 152°45'07"E), 10 specimens, 12–25 November 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; 0.5 km north northeast of junction with Zeehan road, Cooks Creek Trail (30°31'30"S 152°44'40"E), 27 specimens, 12–25 November 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; junction of Moonpar and Mills road, Moonpar State Forest (30°14'36"S 152°37'33"E), 19 specimens, 9–23 December 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; 2 km south southwest of Bostobrick, Cristophersons Mountain, 30°17'45"S 152°37'04"E, 30 specimens, 9–23 November 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; Pacific Highway, 0.7 km southeast of Bird Gully Swamp, Muogamarra Nature Reserve (33°33'42"S 151°11'15"E), 45 specimens, 2–16 December 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; Sirius road, approximately 2 km from junction with Horseshoe road, Oakes State Forest (30°29'19"S 152°35'27"E), 15 specimens, 11–24 November 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; Horseshoe road, approximately 0.5 km north of Scotchman Peak, Diehappy State Forest (30°28'30"S 152°39'43"E), 3 specimens, November 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith; Horseshoe road, 3.5 km southeast of Thora, Scotchman State Forest (30°26'25"S 152°47'30"E), 9 specimens, 10–24 November 1999, collected using pitfall traps, M. Gray, G. Milledge and H. Smith.

Description. Based on holotype female. *Body* shape normally laterally compressed; cuticle calcification absent. *Eye* large (greater than 1/3 head length). *Antenna 2* longer than head and first 3 pereonites; peduncular articles narrow.

Fig. 5. *Arcitalitrus orara* n.sp., holotype, female, 11.0 mm, AM P60954. Scale represents 1 mm.

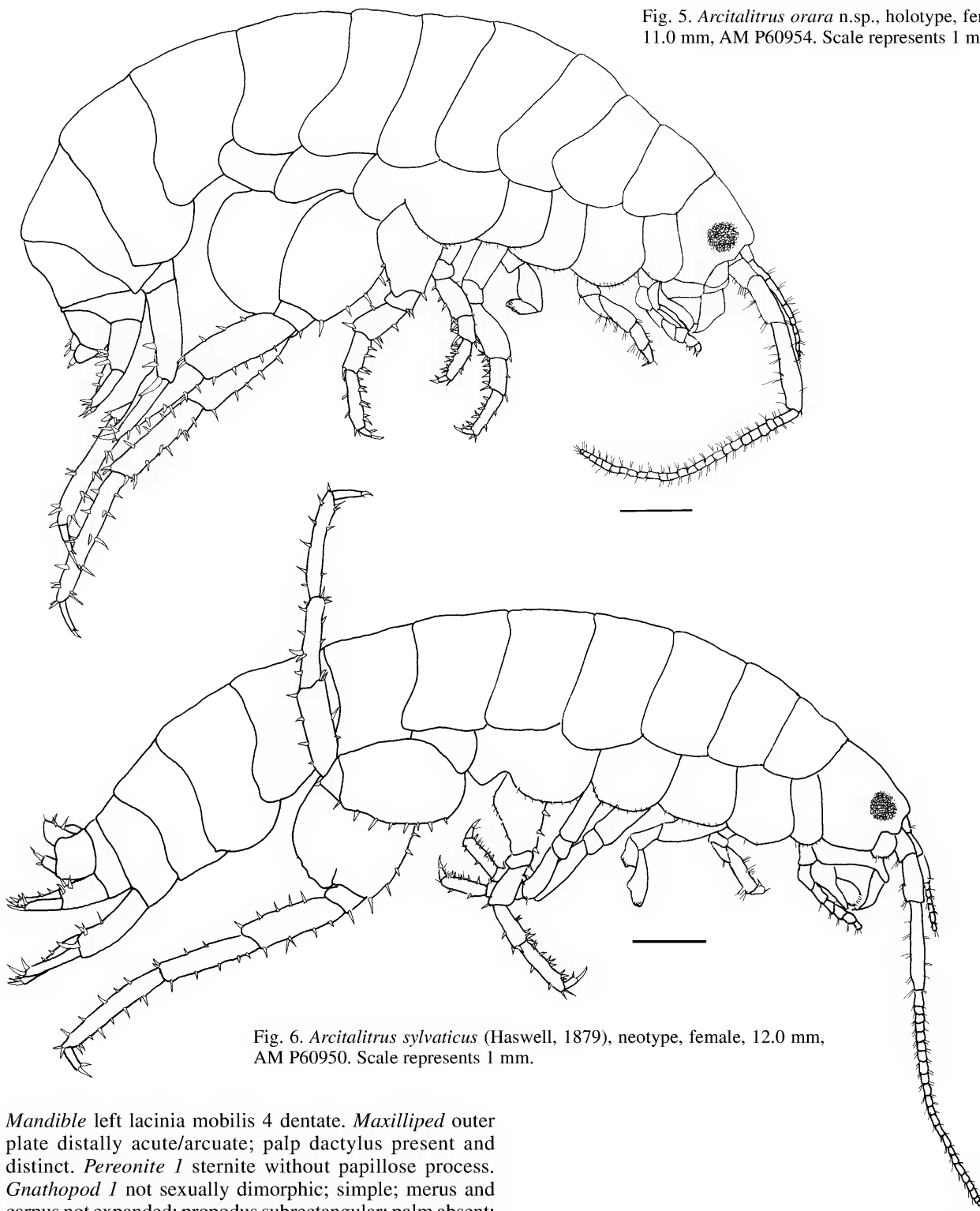


Fig. 6. *Arcitalitrus sylvaticus* (Haswell, 1879), neotype, female, 12.0 mm, AM P60950. Scale represents 1 mm.

Mandible left lacinia mobilis 4 dentate. *Maxilliped* outer plate distally acute/arcuate; palp dactylus present and distinct. *Pereonite 1* sternite without papillose process. *Gnathopod 1* not sexually dimorphic; simple; merus and carpus not expanded; propodus subrectangular; palm absent; dactylus longer than palm. *Gnathopod 2* not sexually dimorphic; chelate; narrow; merus and carpus expanded posteriorly; propodus "mitten-like"; palm obtuse; smooth; dactylus shorter than palm. *Pereopods 3–7* long ($\frac{1}{2}$ length of body); simplidactylate. *Pereopod 4* carpus similar in length to pereopod 3 carpus, dactylus similar to pereopod 3 dactylus. *Pereopod 7* posterodistal lobe present. *Gill 2* lobate, not incised. *Gills 3–5* lobate, smaller than gills 2 and 6. *Gill 6* lobate, anterior margin convoluted, **subapically incised along posterior margin**. *Oostegites* long (length

greater than $2\times$ width), weakly setose, setae with simple smooth tips. *Epimera 1 to 3* not convergent. ***Epimeron 2* subequal in length to *epimeron 3***. *Epimeron 3* posteroventral margin smooth, posteroventral corner with small subacute tooth. *Pleopod 1* well developed, biramous, rami subequal in length to peduncle; inner ramus with 11 articles; outer ramus with 8 articles, outer ramus with 6–10 articles. *Pleopod 2* well developed, biramous, rami shorter than peduncle; inner ramus with 7 articles; outer ramus with 5 articles. *Pleopod 3* reduced, rami absent. *Uropod 1* not

sexually dimorphic; peduncle with 6 robust setae on peduncle; inner ramus shorter than outer ramus, with 3 robust setae on the margins, with 3 apical robust setae; outer ramus without marginal robust setae, with 3 apical robust setae. *Uropod 2* not sexually dimorphic; peduncle with 3 robust setae; inner ramus subequal in length to outer ramus, with 2 marginal robust setae, 4 apical robust setae; outer ramus without marginal robust setae, with 3 apical robust setae. *Uropod 3* peduncle with 1 robust setae; ramus shorter than peduncle, **ramus bud-like (broad)**, with 2 robust setae. **Telson** as broad as long, **entire**, with marginal and apical robust setae, with 3–5 robust setae per lobe.

Etymology. Named for Orara State Forest, the type locality and treated as a noun in apposition.

Habitat. Forest floor leaf-litter.

Remarks. *Arcitalitrus orara* is a member of the “sylvaticus” species group. It differs from other species in the group in having bud-like rami on uropod 3, an entire telson and, except for *Ar. nana*, in having a large eye. *Arcitalitrus orara* and *Ar. sylvaticus* both have reduced numbers of articles on the outer ramus of pleopod 2. *Arcitalitrus orara*, *Ar. belbucca* and *Ar. nana* all have the inner ramus of uropod 1 shorter than the outer.

Distribution. New South Wales: Orara State Forest; Oakes State Forest; Kuring-gai Chase National Park; Brisbane Water National Park; Dorrigo National Park; Gladstone State Forest; Cooks Creek Trail; Moonpar State Forest; Cristophersons Mountain; Muogamarra Nature Reserve; north of Scotchman Peak, Diehappy State Forest; Scotchman State Forest.

Arcitalitrus sylvaticus (Haswell)

Figs. 6, 24–26

Talitrus sylvaticus Haswell, 1879: 246, pl. 7, fig. 1; Stebbing, 1906: 524; Sayce, 1909: 30; Chilton, 1916: 83; Clark, 1955: 253–257; Ingle, 1958: 591–592 (probably *Ar. dorrieni*); Shoemaker, 1936; Bousfield & Carlton, 1967: 282; Bousfield, 1975: 353 (key).

Talitrus (Arcitalitrus) sylvaticus.—Hurley, 1975: 161.

Arcitalitrus sylvaticus.—Bousfield, 1982: 55; Bousfield, 1984: 206, table 7; Lazo-Wasem, 1983: 213; Lazo-Wasem, 1984: 343; Friend, 1987: 35, 38; Duncan, 1994: 11, pl. 1.

Not *Talitrus sylvaticus*.—Thomson, 1893: 59, pl. iv, figs 1, 2, 4, 7, 9, 10 (part = *Mysticotalitrus cryptus* Friend, 1987; part = *Keratroides vulgaris* Friend, 1979). Chevreux, 1901: 392, fig. 7 (= *Arcitalitrus bassianus* Friend, 1987). Smith, 1909: 79. Hale, 1929: 218, fig. 216 (= *Austrotroides crenatus* Friend, 1982). Ruffo, 1949: 206 (part = *Keratroides vulgaris* Friend, 1979).

Type material. *Neotype*. Female, 12.0 mm, AM P60950.

Type locality. Nurragingy Reserve, Rooty Hill (33°46'S 150°51'E), Sydney, Australia.

Description. Based on neotype female. *Body* shape normally laterally compressed; cuticle calcification absent.

Eye medium ($\frac{1}{5}$ – $\frac{1}{3}$ head length). *Antenna 2* longer than head and first 3 pereonites; peduncular articles narrow. *Maxilliped* outer plate distally acute/arcuate; palp dactylus present and distinct. *Pereonite 1* sternite without papillose process. *Gnathopod 1* not sexually dimorphic; simple; merus and carpus not expanded; propodus subrectangular; palm absent; dactylus longer than palm. *Gnathopod 2* not sexually dimorphic; chelate; narrow; merus and carpus expanded posteriorly; propodus “mitten-like”; palm obtuse; smooth; dactylus shorter than palm. *Pereopods 3–7* long ($\frac{1}{2}$ length of body); simplidactylate. *Pereopod 4* carpus similar in length to pereopod 3 carpus, dactylus similar to pereopod 3 dactylus. *Pereopod 7* posterodistal lobe present. *Gill 2* lobate, not incised. *Gills 3–5* simple or lobate, smaller than gills 2 and 6. *Gill 6* lobate, **anterior margin convoluted, subapically incised along posterior margin**. *Oostegites* long (length greater than 2× width), **strongly setose**, setae with simple smooth tips. *Epimera 1 to 3* not convergent. *Epimeron 2* subequal in length to epimeron 3. *Epimeron 3* posteroventral margin smooth, posteroventral corner with small subacute tooth. **Pleopod 1** well developed, biramous, **rami subequal in length to peduncle**; inner ramus with 13 articles; outer ramus with 10 articles. *Pleopod 2* well developed, biramous, rami subequal in length to peduncle; inner ramus with 8 articles; outer ramus with 3 articles, outer ramus with 1–5 articles. *Pleopod 3* reduced, rami absent. **Uropod 1** not sexually dimorphic; peduncle with 4 robust setae on peduncle; inner ramus subequal in length to outer ramus, with 2 robust setae on the margins, **with 1–2 robust setae**, with 5 apical robust setae; outer ramus without marginal robust setae, with 4 apical robust setae. *Uropod 2* not sexually dimorphic; peduncle with 3 robust setae; inner ramus subequal in length to outer ramus, with 2 marginal robust setae, 5 apical robust setae; outer ramus without marginal robust setae, with 3 apical robust setae. *Uropod 3* peduncle with 1 robust seta; ramus shorter than peduncle, ramus linear (narrowing), with 2 robust setae. **Telson** as broad as long, apically incised, with marginal and apical robust setae, with 3–5 robust setae per lobe.

Habitat. Found in leaf litter under *Eucalyptus* trees.

Remarks. This specimen was collected in the Nurragingy Reserve, Rooty Hill, that is within the area described as the type locality. The habitat is extremely modified, but populations of *Ar. sylvaticus* occur beneath the weeds near the stream which runs through the reserve.

Arcitalitrus sylvaticus is a member of the “sylvaticus” species group, but it apparently has no special affinities with other species in the group. Within the group, only *Ar. sylvaticus* has strongly setose oostegites, only *Ar. sylvaticus* and *Ar. belbucca* have the subequal rami on pleopod 2 and only *Ar. sylvaticus* and *Ar. bassianus* have subequal rami on uropod 1 and an apically incised telson.

The species described as *Talitrus assimilis* Haswell, 1880 has been referred to at times (Haswell, 1885) as *Ar. sylvaticus*. Friend (1987) doubted the validity of *T. assimilis* and stated that it may be in the genus *Keratroides* or *Mysticotalitrus*.

Distribution. Along the Great Dividing Range of New South Wales and Victoria (Haswell, 1879; Sayce, 1909; Chilton, 1916; Schellenberg, 1934; Sandel, 1977; Friend, 1982; 1987).

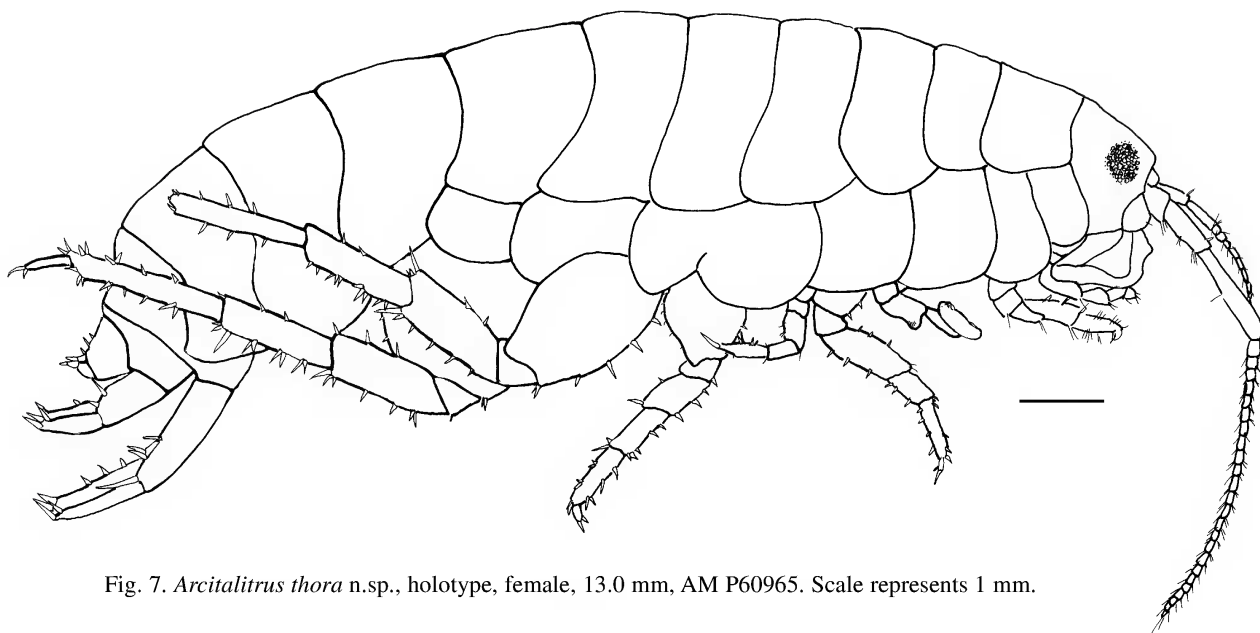


Fig. 7. *Arcitalitrus thora* n.sp., holotype, female, 13.0 mm, AM P60965. Scale represents 1 mm.

***Arcitalitrus thora* n.sp.**

Figs. 7, 27–29

Type material. HOLOTYPE, ♀, 13.0 mm, AM P60965, M. Gray, G. Milledge and H. Smith December 1999. PARATYPES 15 specimens AM P60966. Paratypes are all from the type locality.

Type locality. Horseshoe Road, 3.5 km southeast of Thora, Scotchman State Forest (30°26'25"S 152°47'30"E).

Description. Based on holotype female. *Body* shape normally laterally compressed; cuticle calcification absent. *Eye* large (greater than $\frac{1}{3}$ head length). *Antenna* 2 longer than head and first 3 pereonites; peduncular articles narrow. *Mandible* left lacinia mobilis 5 dentate. *Maxilliped* outer plate distally acute/arcuate; palp dactylus present and distinct. *Gnathopod* 1 not sexually dimorphic; simple; merus and carpus not expanded; propodus subrectangular; palm absent; dactylus longer than palm. *Gnathopod* 2 not sexually dimorphic; chelate; narrow; merus and carpus expanded posteriorly; propodus "mitten-like"; palm obtuse; smooth; dactylus shorter than palm. *Pereopods* 3–7 long ($\frac{1}{2}$ length of body); simplidactylate. *Pereopod* 4 carpus similar in length to pereopod 3 carpus, dactylus similar to pereopod 3 dactylus. *Pereopod* 7 posterodistal lobe present. *Gill* 2 lobate, not incised. *Gills* 3–5 lobate, smaller than gills 2 and 6. *Gill* 6 lobate, **posterior margin convoluted, apically incised**. *Oostegites* long (length greater than $2\times$ width), **weakly setose**, setae with simple smooth tips. *Epimera* 1 to 3 not convergent. ***Epimeron* 2 subequal in length to epimeron 3.** *Epimeron* 3 posteroventral margin smooth, posteroventral corner with small subacute tooth. *Pleopod* 1 well developed, biramous, rami shorter than peduncle; inner ramus with 12 articles; outer ramus with 9 articles. *Pleopod* 2 well developed, biramous, rami shorter than peduncle; inner ramus with 12 articles; outer ramus with 11 articles, outer ramus with more than 10 articles. *Pleopod* 3 reduced, rami absent. *Uropod* 1 not sexually dimorphic; peduncle with 4 robust setae on peduncle; inner ramus subequal in

length to outer ramus, with 3 robust setae on the margins, **with 3–5 robust setae**, with 4 apical robust setae; outer ramus without marginal robust setae, with 4 apical robust setae. *Uropod* 2 not sexually dimorphic; peduncle with 3 robust setae; inner ramus subequal in length to outer ramus, with 2 marginal robust setae, 3 apical robust setae; outer ramus without marginal robust setae, with 3 apical robust setae. *Uropod* 3 peduncle with 1 robust setae; ramus shorter than peduncle, ramus bud-like (broad), with 2 robust setae. *Telson* longer than broad, apically incised, with marginal and apical robust setae, with 3–5 robust setae per lobe.

Etymology. Named for the village of Thora, near Scotchman State Forest, the type locality and treated as a noun in apposition.

Habitat. Forest floor leaf-litter.

Remarks. *Arcitalitrus thora* appears to be isolated from other *Arcitalitrus* species. It is excluded from the "sylvaticus" species group because it has smooth anterior margin on gill 6 with an apical incision, and the rami of pleopod 1 are shorter than the peduncle. It is excluded from the "Dorrieni" species group because epimeron 2 is subequal in length to epimeron 3, epimeron 3 has a small posteroventral cusp and the telson is apically incised. It is excluded from both groups by the convoluted posterior margin on gill 6 and the large number of articles in the outer ramus of pleopod 2 and the large number of robust setae on the inner ramus of uropod 2.

Distribution. New South Wales: Scotchman State Forest.

ACKNOWLEDGMENTS. We thank Tony Friend who generously shared his unpublished information on terrestrial talitrids with us. Funding was provided through the New South Wales Biodiversity Strategy for the taxonomy of terrestrial invertebrates. We would also like to thank our Australian Museum colleagues: Mike Gray, Graeme Milledge and Helen Smith who generously collected all the material allowing us to describe the new species.

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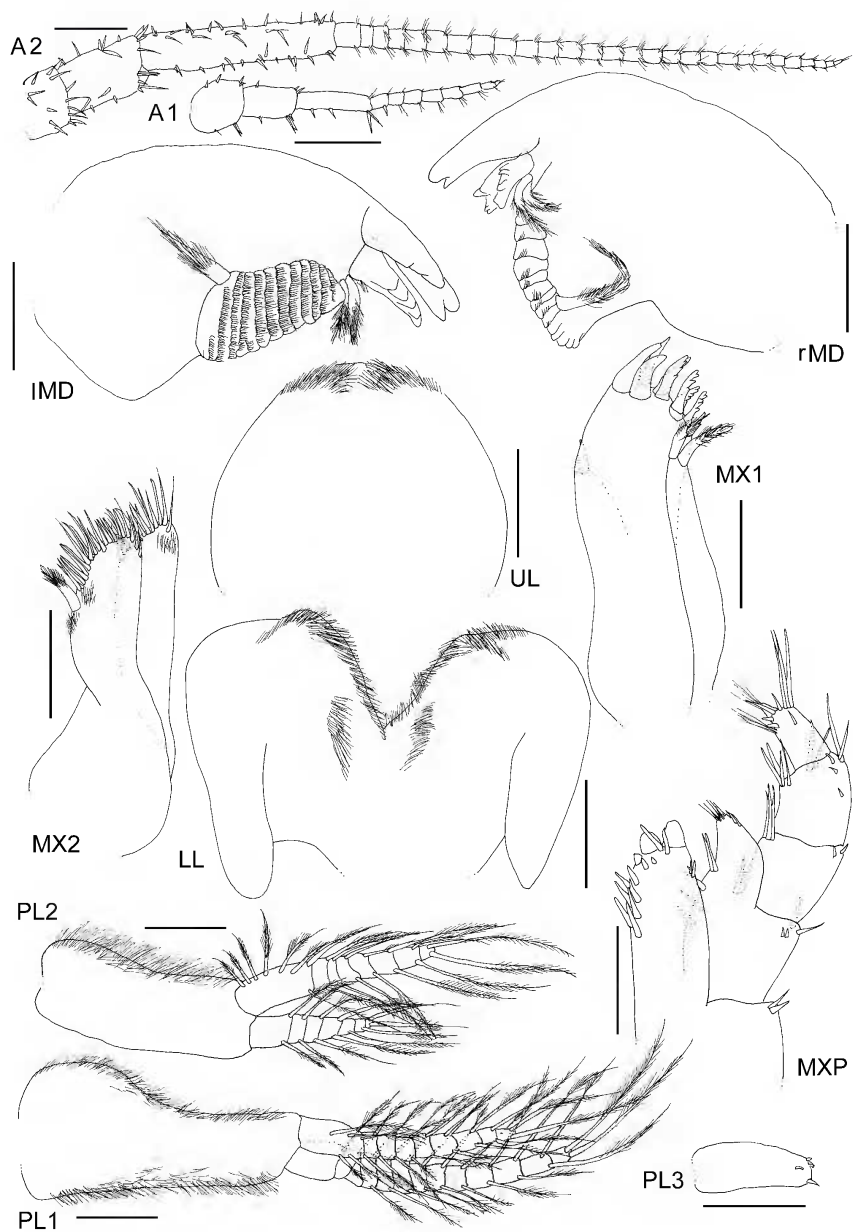


Fig. 8. *Arcitalitrus belbucca* n.sp., holotype, female, 14.0 mm, AM P60959. Scales represent 0.5 mm for antennae 1–2 and 0.2 mm for mouthparts and pleopods.

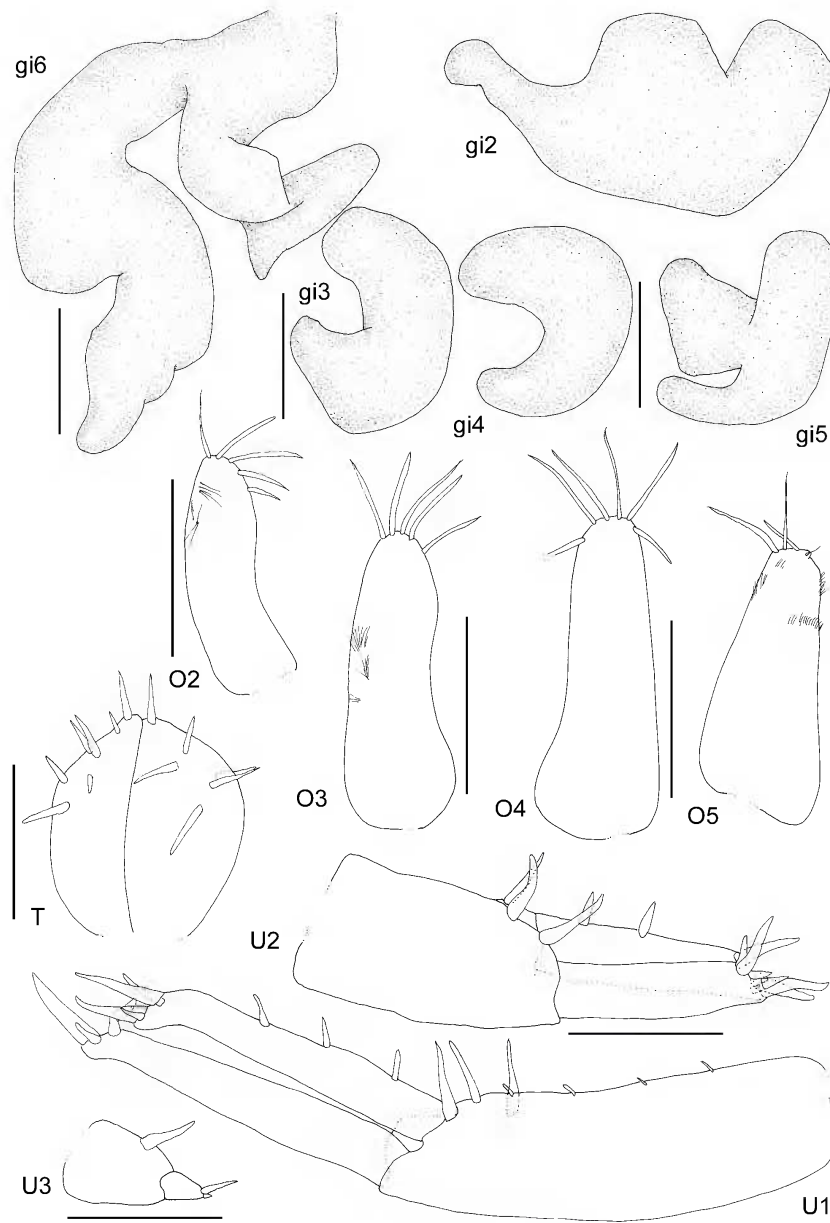


Fig. 9. *Arcitalitrus belbucca* n.sp., holotype, female, 14.0 mm, AM P60959. Scales represent 0.5 mm.

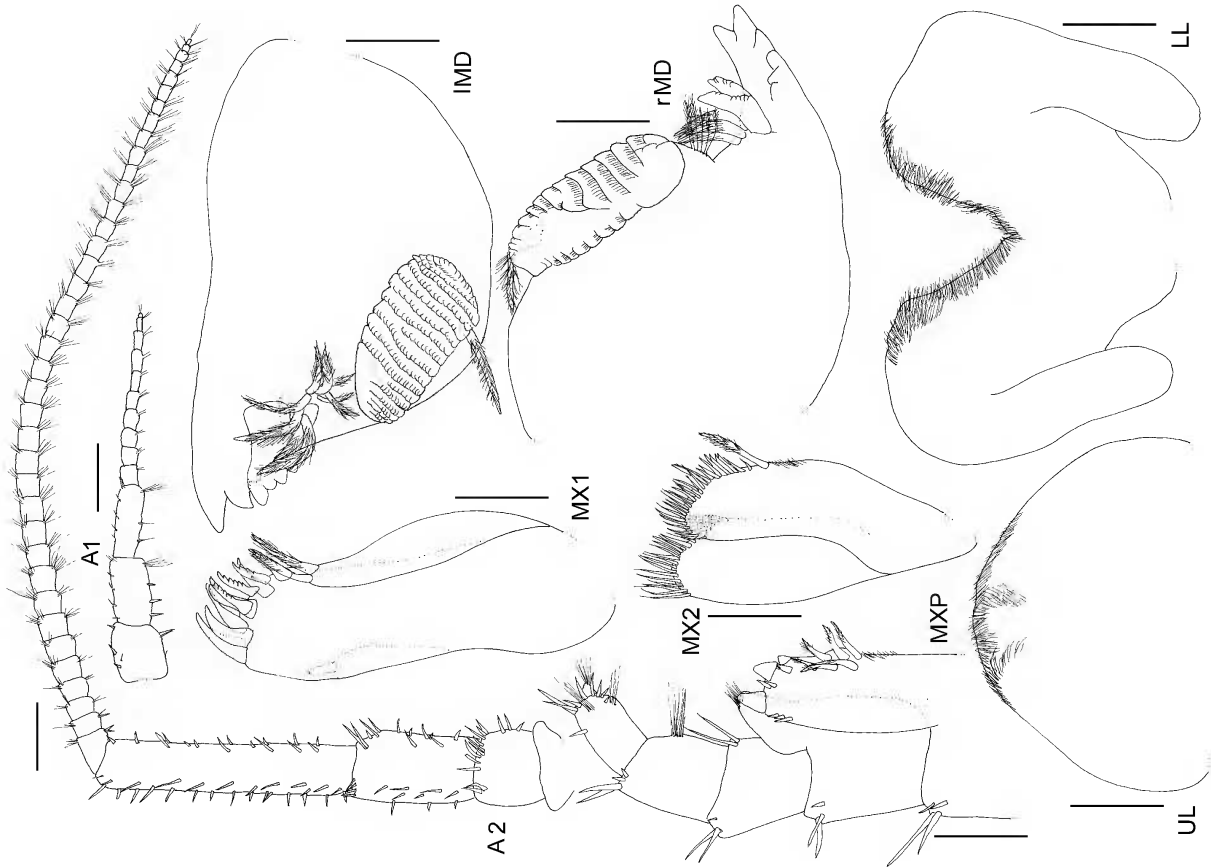


Fig. 11. *Arcitalitrus bundeena* n.sp., holotype, female, 15 mm, AM P60957. Scales represent 0.5 mm for antennae 1–2 and 0.2 mm for mouthparts.

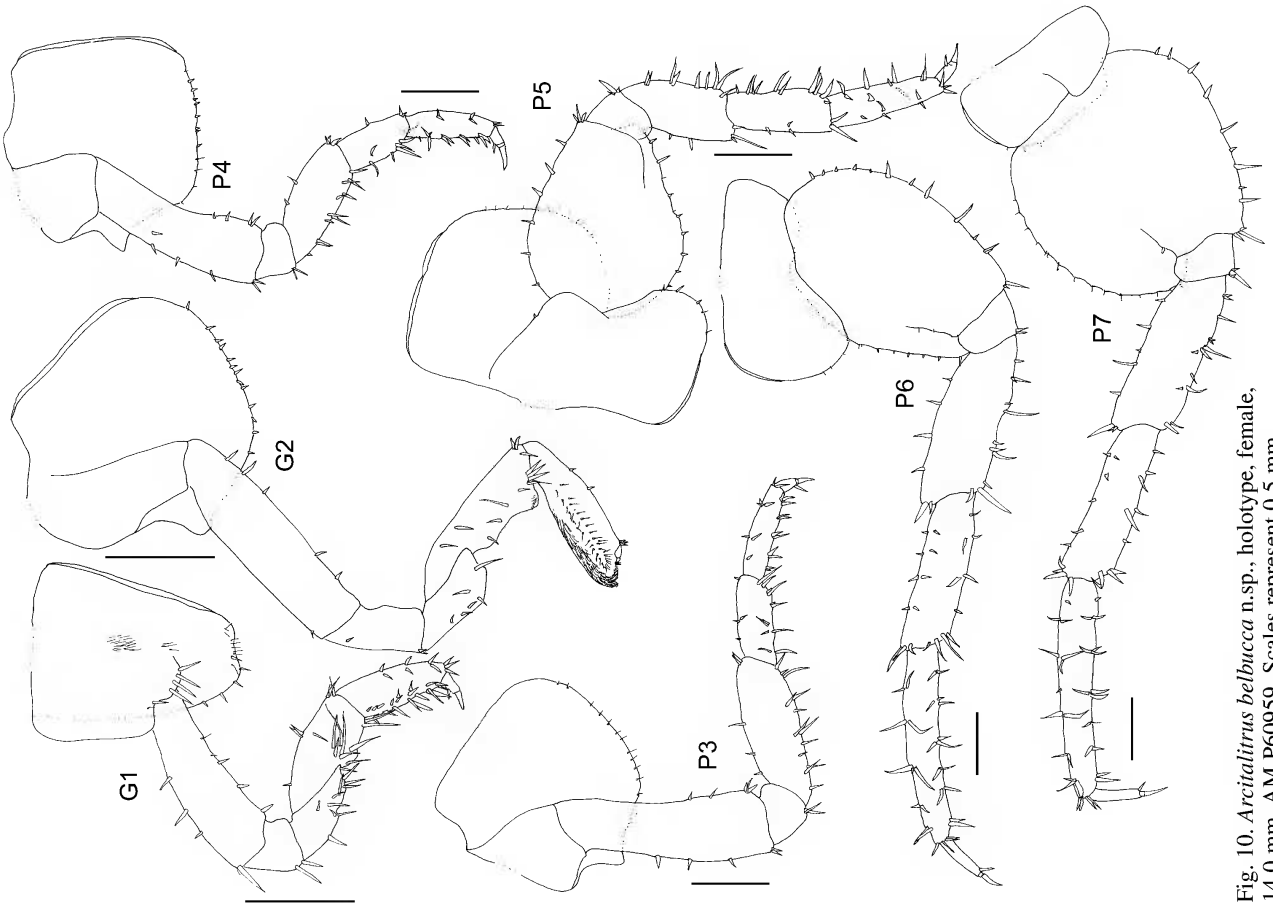


Fig. 10. *Arcitalitrus belbucca* n.sp., holotype, female, 14.0 mm, AM P60959. Scales represent 0.5 mm.

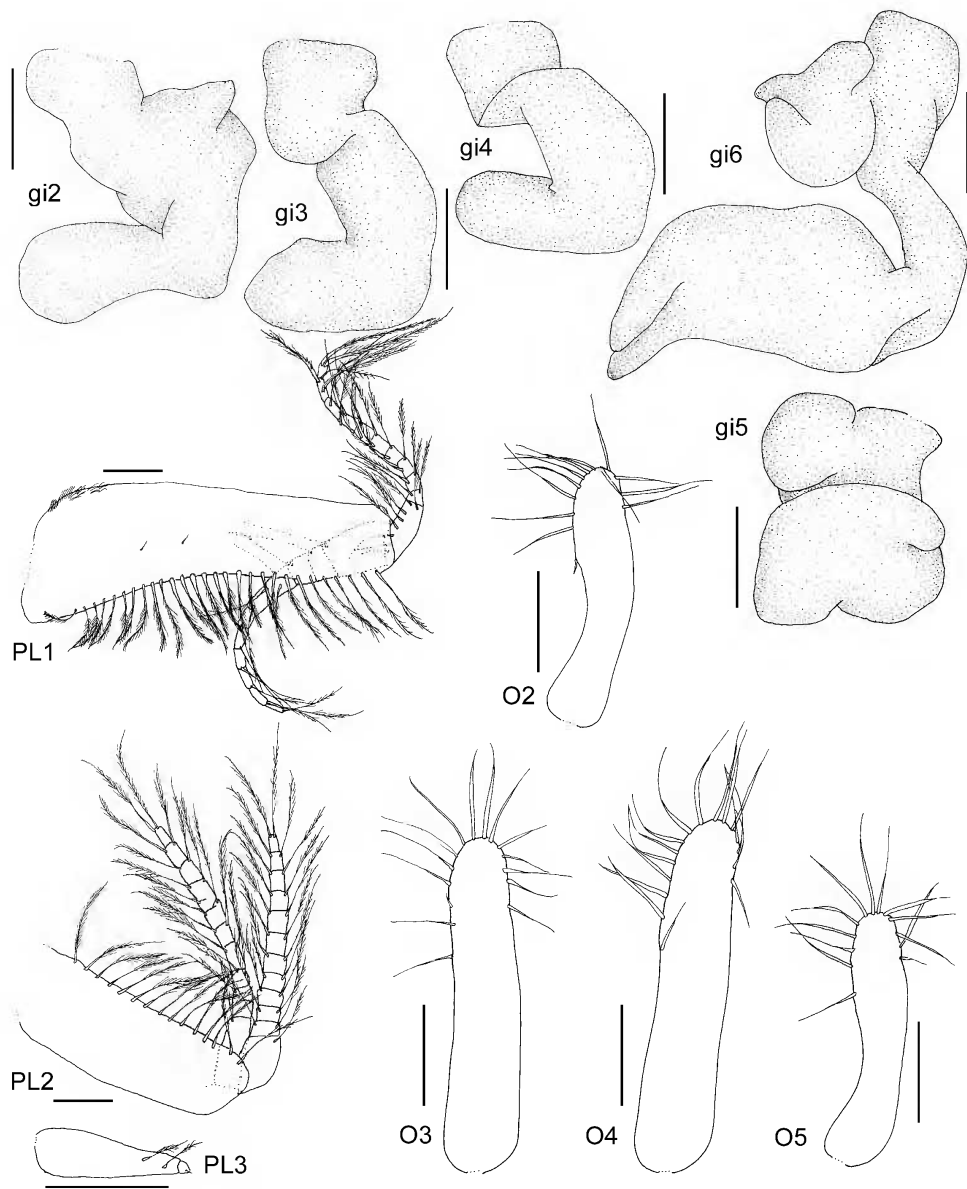


Fig. 12. *Arcitalitrus bundeena* n.sp., holotype, female, 15 mm, AM P60957. Scales represent 0.2 mm for pleopods 1–3 and 0.5 mm for gills 2–6 and oostegites 2–5.

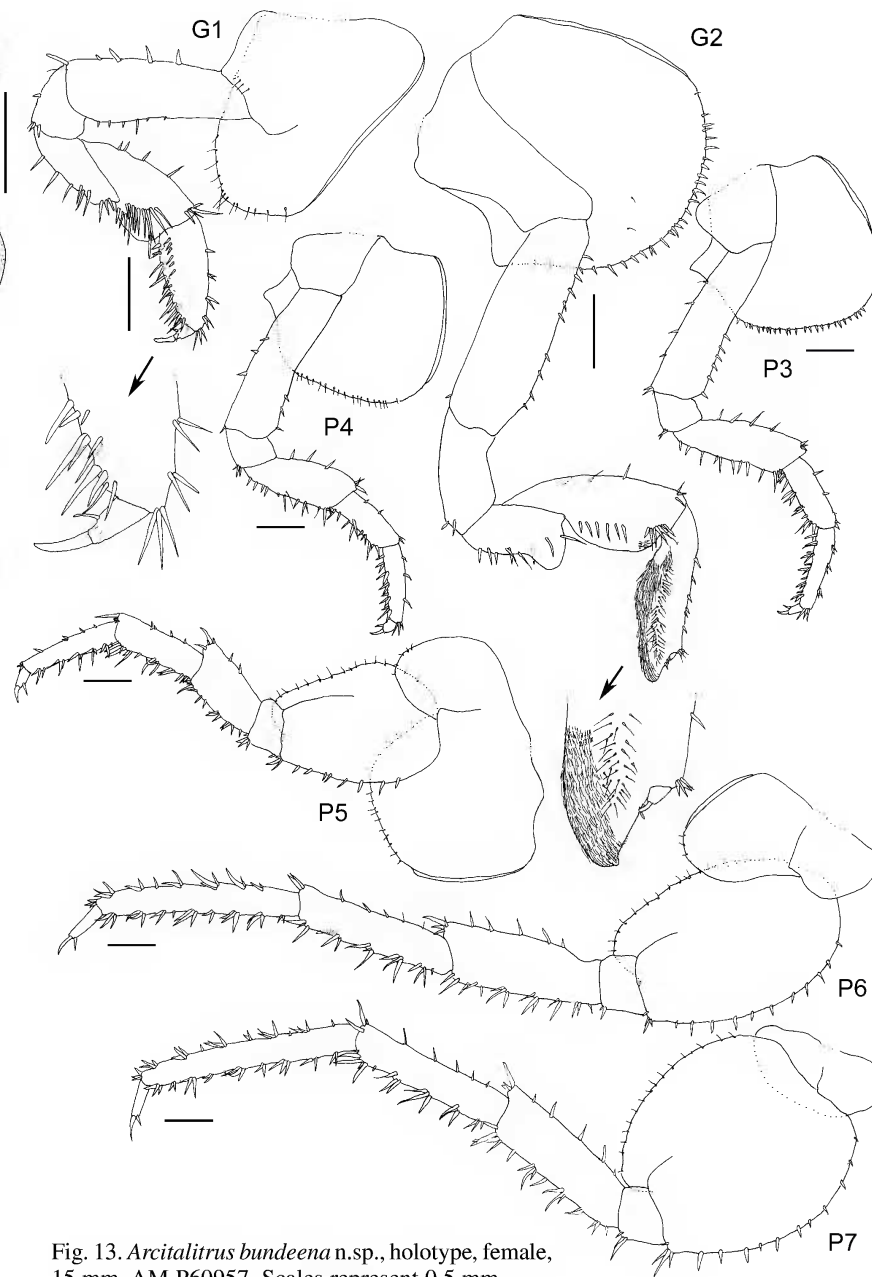


Fig. 13. *Arcitalitrus bundeena* n.sp., holotype, female, 15 mm, AM P60957. Scales represent 0.5 mm.

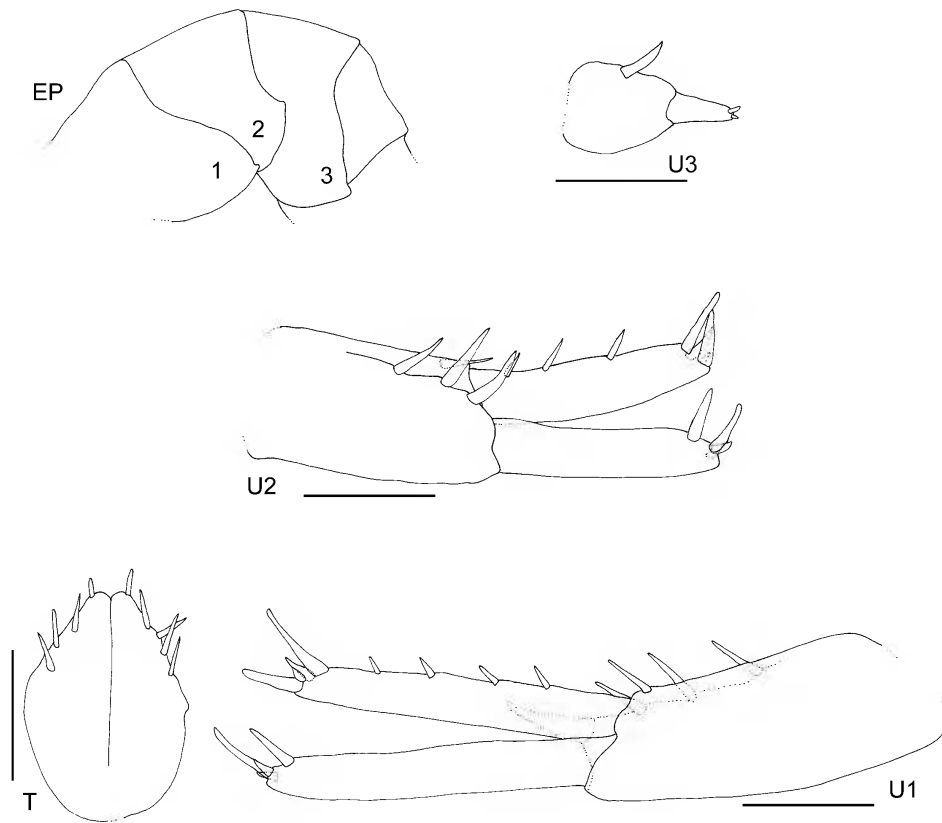


Fig. 14. *Arcitalitrus bundeena* n.sp., holotype, female, 15 mm, AM P60957. Scales represent 0.5 mm.

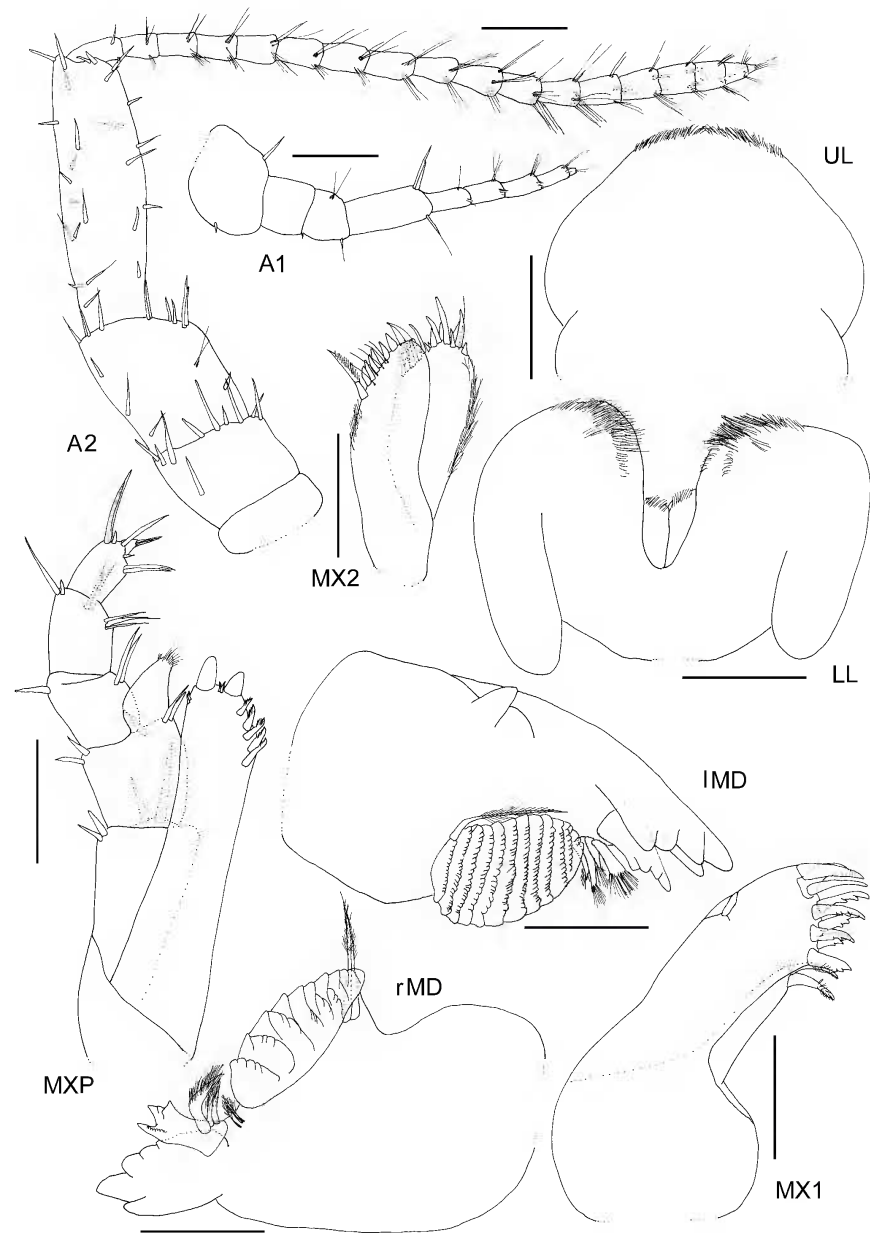


Fig. 15. *Arcitalitrus moonpar* n.sp., holotype, female, 9.0 mm, AM P60962. Scales represent 0.2 mm.

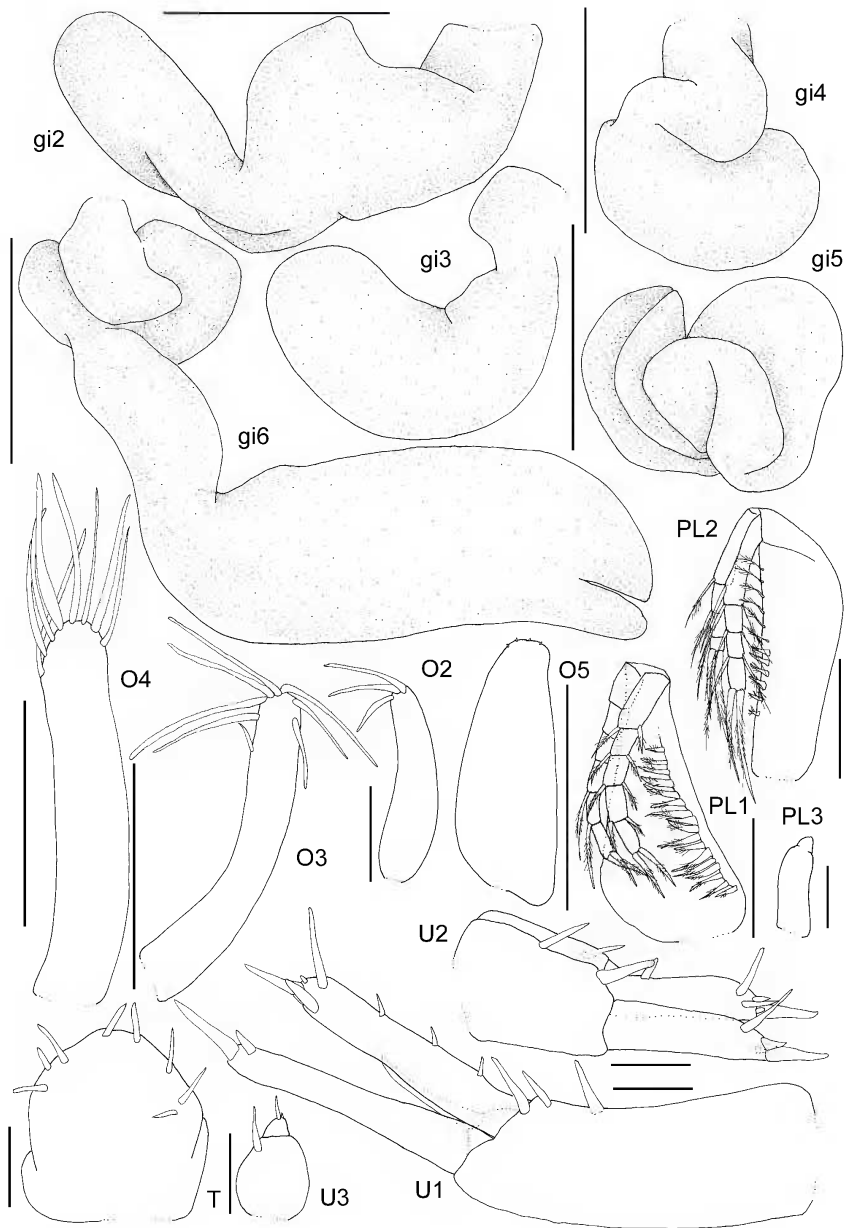


Fig. 16. *Arcitalitrus moonpar* n.sp., holotype, female, 9.0 mm, AM P60962. Scales represent 0.2 mm for uropods 1–3, telson, pleopods 1–3 and oostegite 2 and 0.5 mm for gills 2–6 and oostegites 3–5.

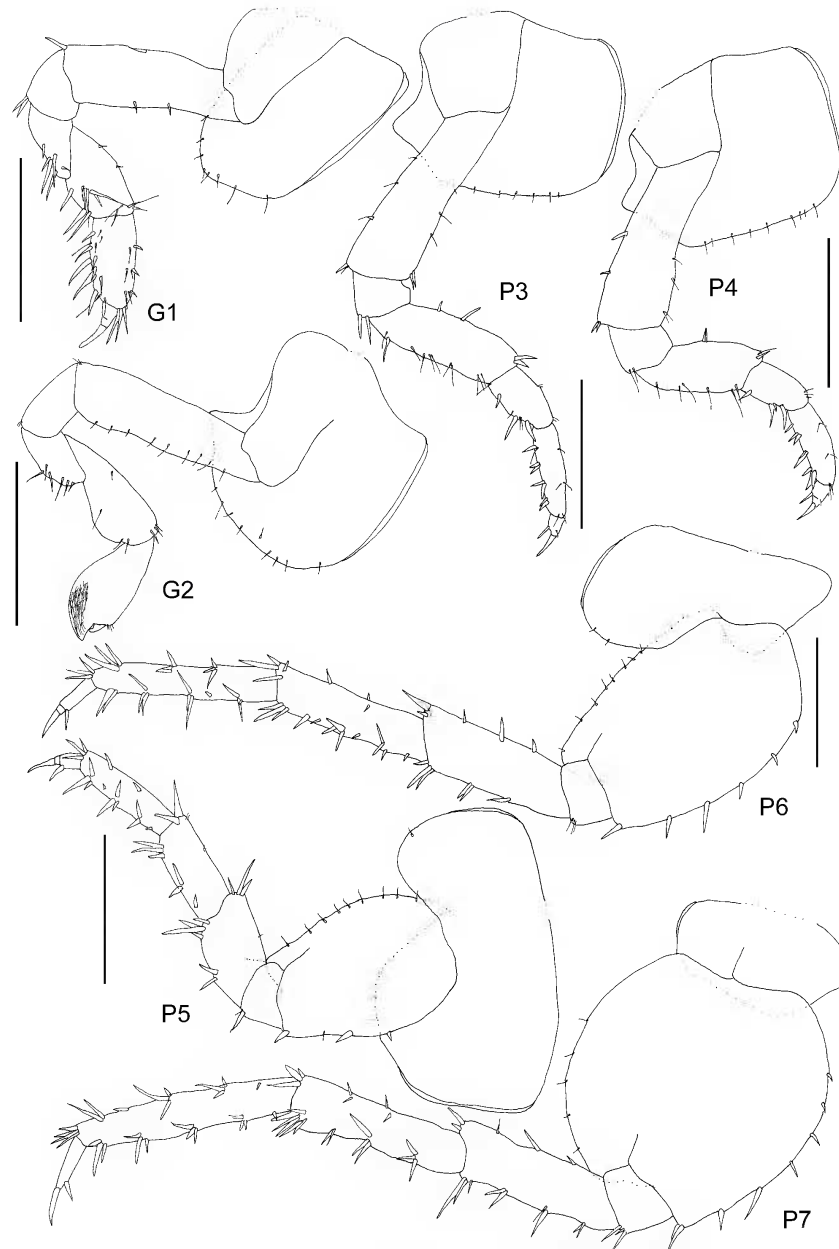


Fig. 17. *Arcitalitrus moonpar* n.sp., holotype, female, 9.0 mm, AM P60962. Scales represent 0.5 mm.

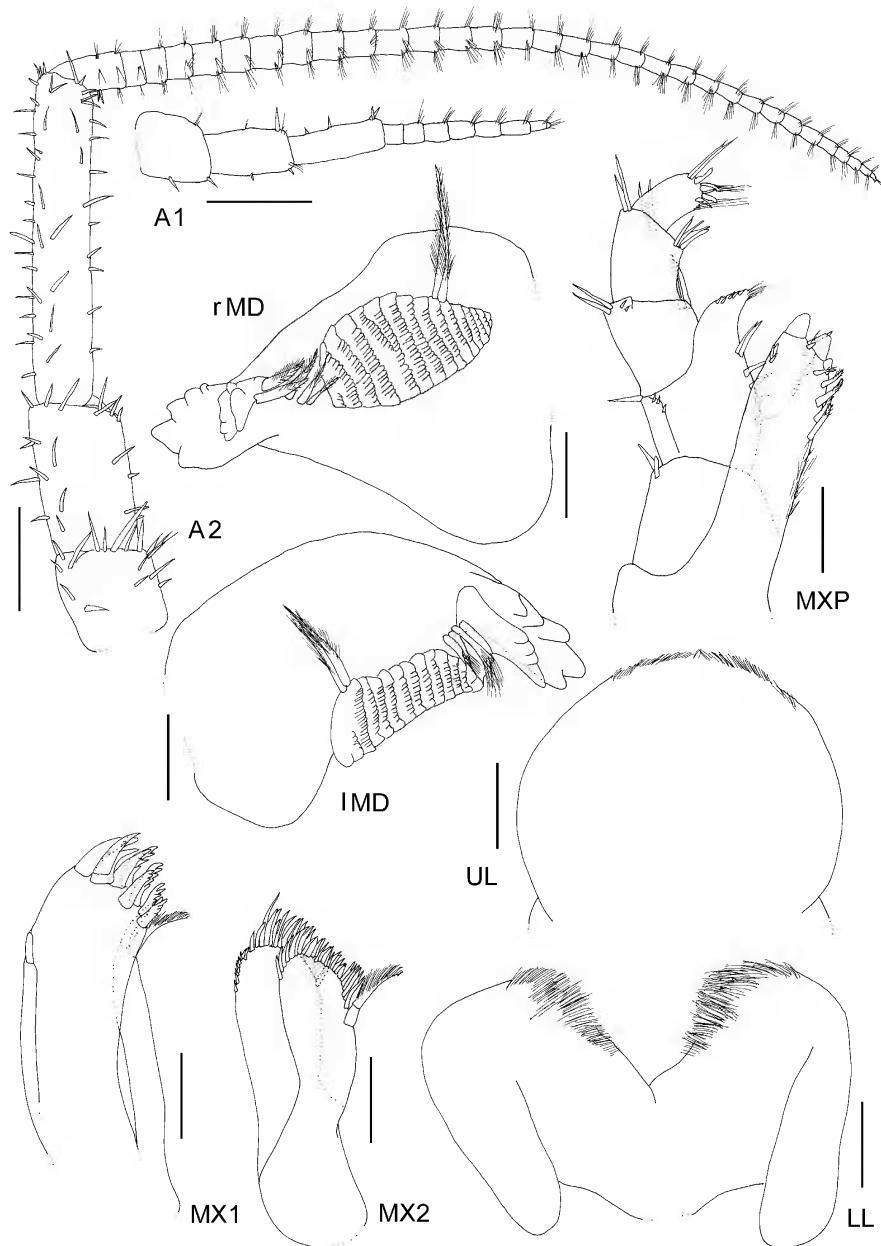


Fig. 18. *Arcitalitrus nana* n.sp., holotype, female, 15.0 mm, AM P60956. Scales represent 0.5 mm for antennae 1–2 and 0.2 mm for mouthparts.

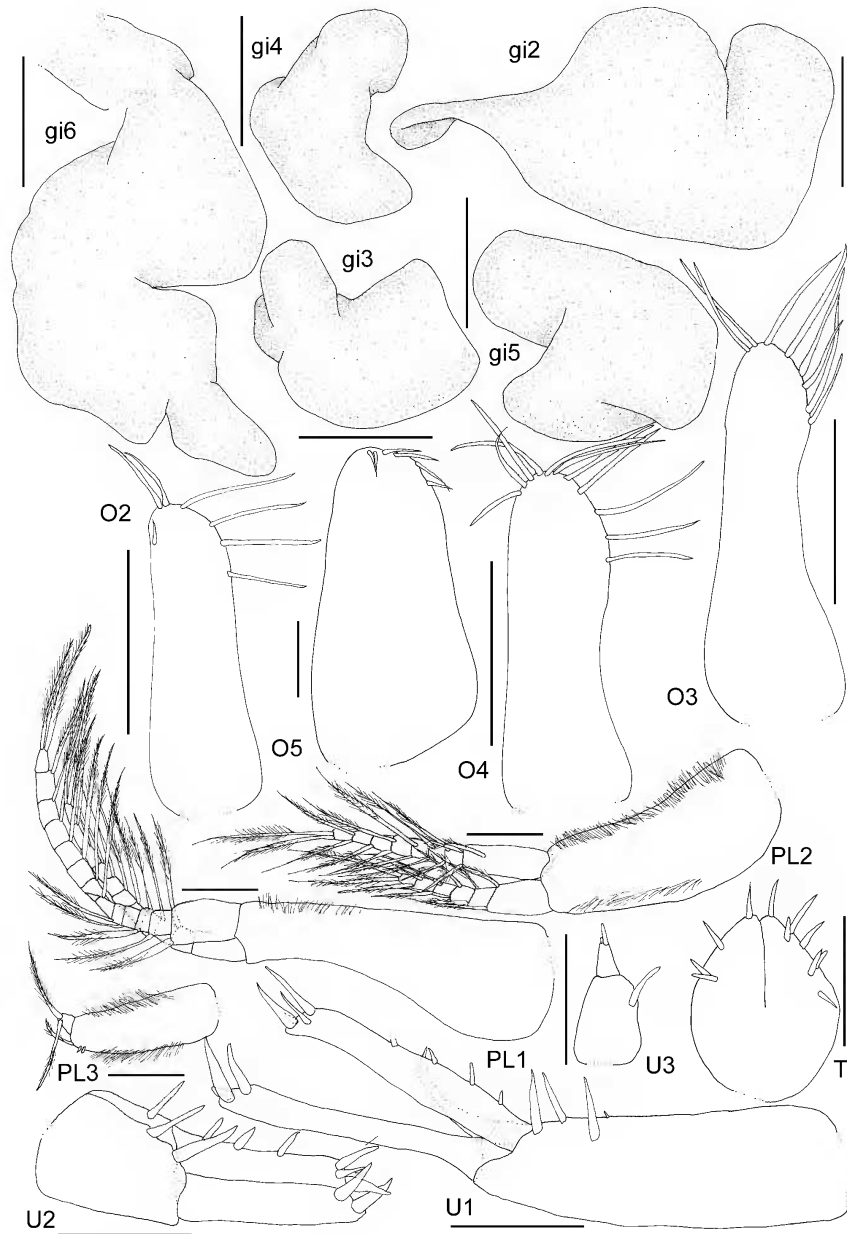


Fig. 19. *Arcitalitrus nana* n.sp., holotype, female, 15.0 mm, AM P60956. Scales represent 0.2 mm for pleopods 1–3 and 0.5 mm for the other parts.

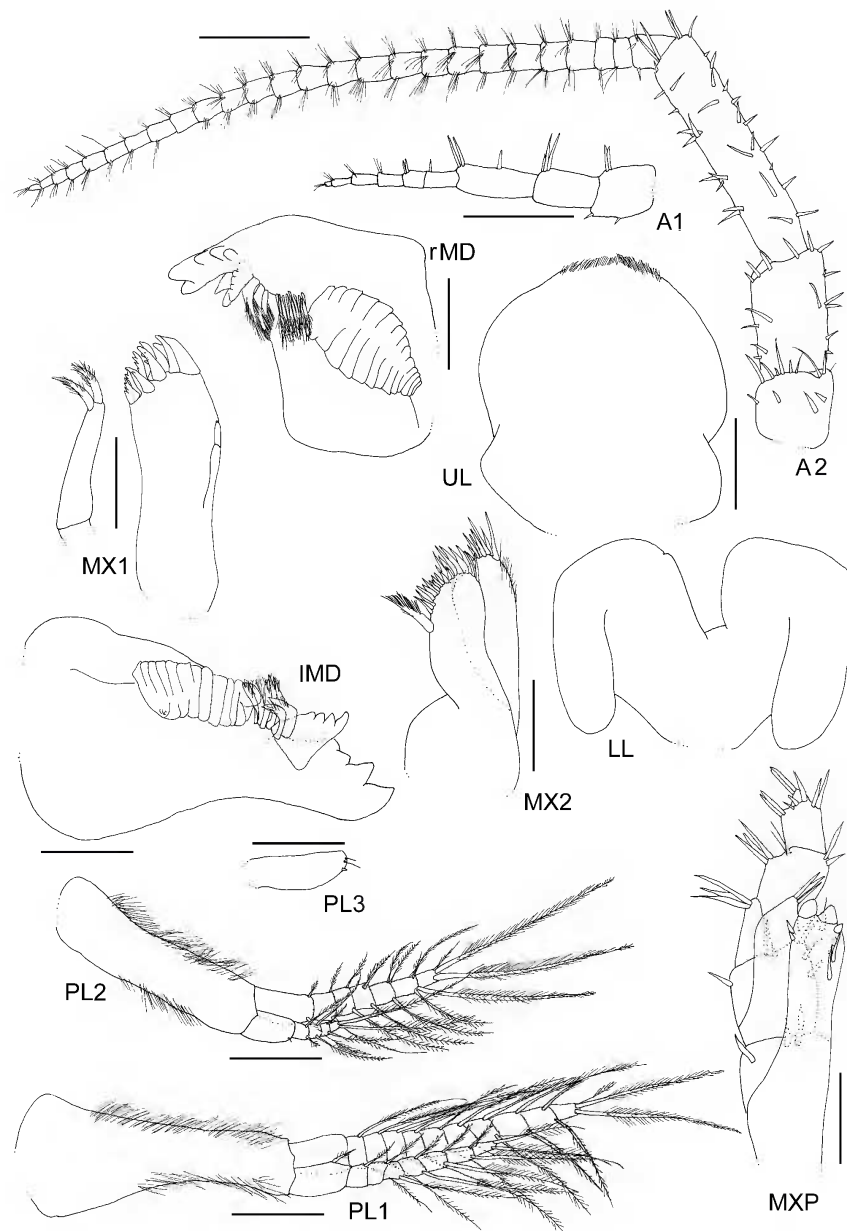
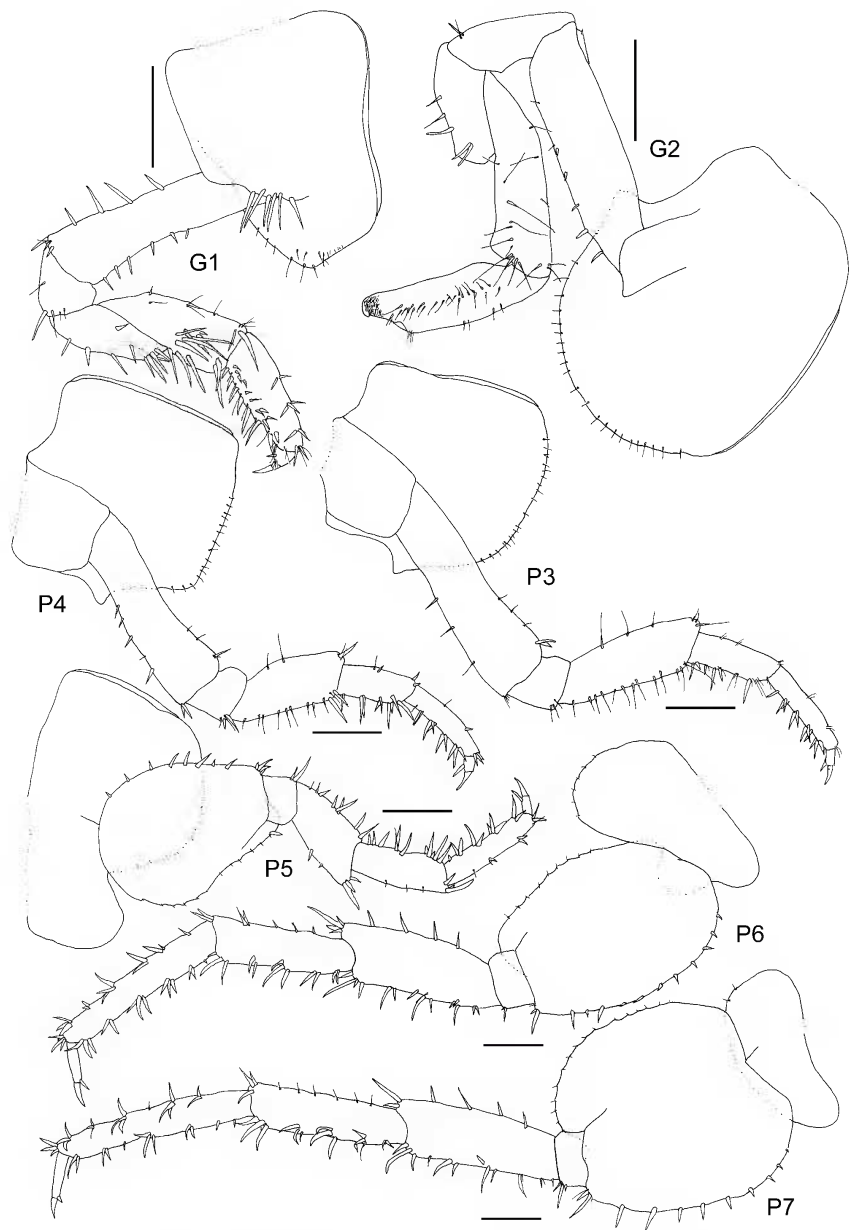


Fig. 20. *Arcitalitrus nana* n.sp., holotype, female, 15.0 mm, AM P60956. Scales represent 0.5 mm.

Fig. 21. *Arcitalitrus orara* n.sp., holotype, female, 11.0 mm, AM P60954. Scales represent 0.5 mm for antennae 1–2 and 0.5 mm for mouthparts.

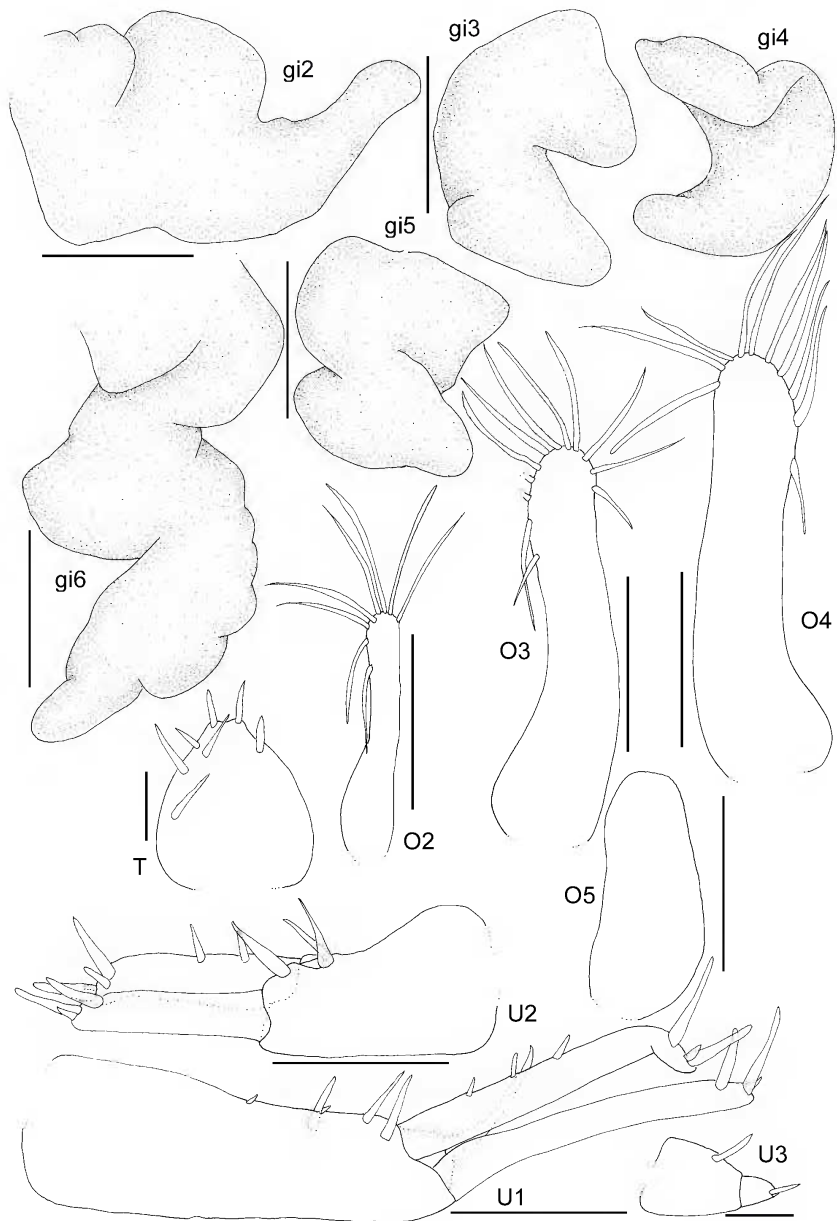


Fig. 22. *Arcitalitrus orara* n.sp., holotype, female, 11.0 mm, AM P60954. Scales represent 0.5 mm.

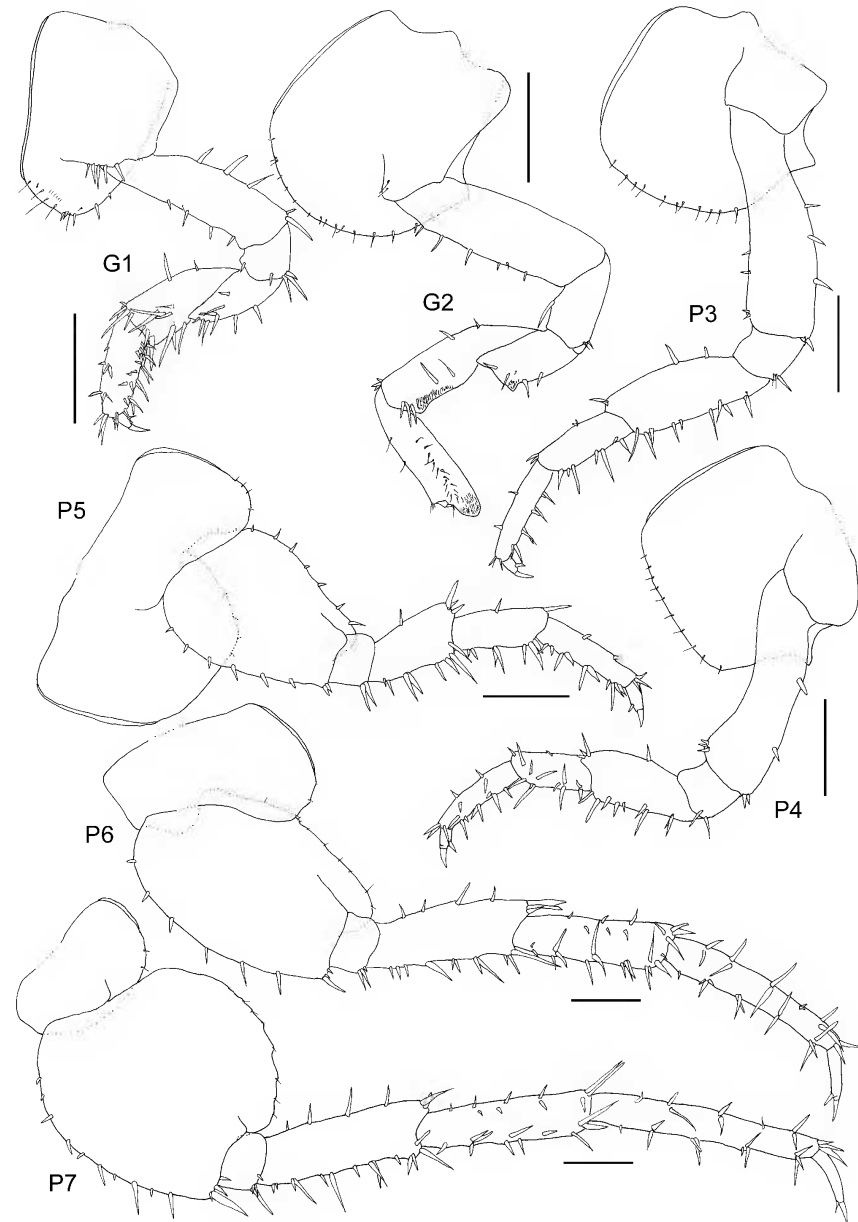


Fig. 23. *Arcitalitrus orara* n.sp., holotype, female, 11.0 mm, AM P60954. Scales represent 0.5 mm.

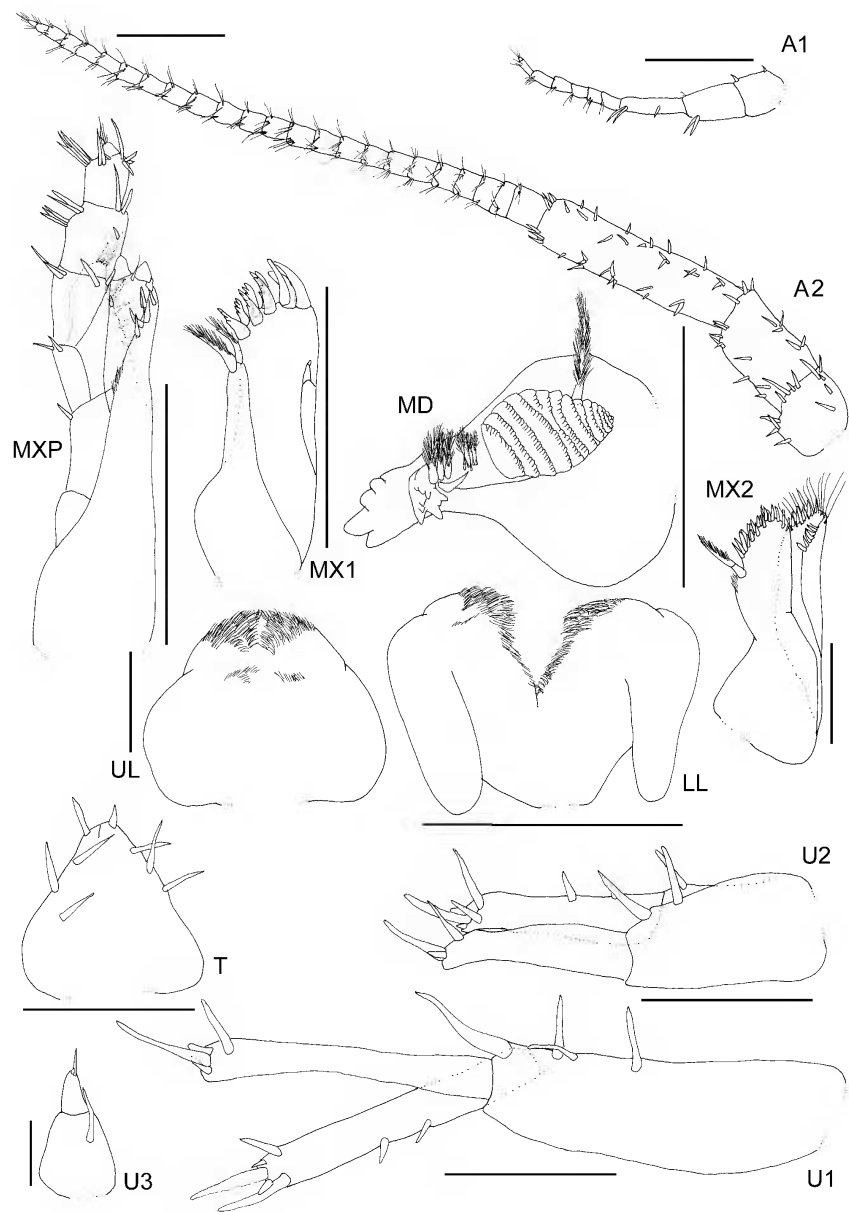


Fig. 24. *Arcitalitrus sylvaticus* (Haswell, 1879), neotype, female, 12.0 mm, AM P60950. Scales represent 0.5 mm.

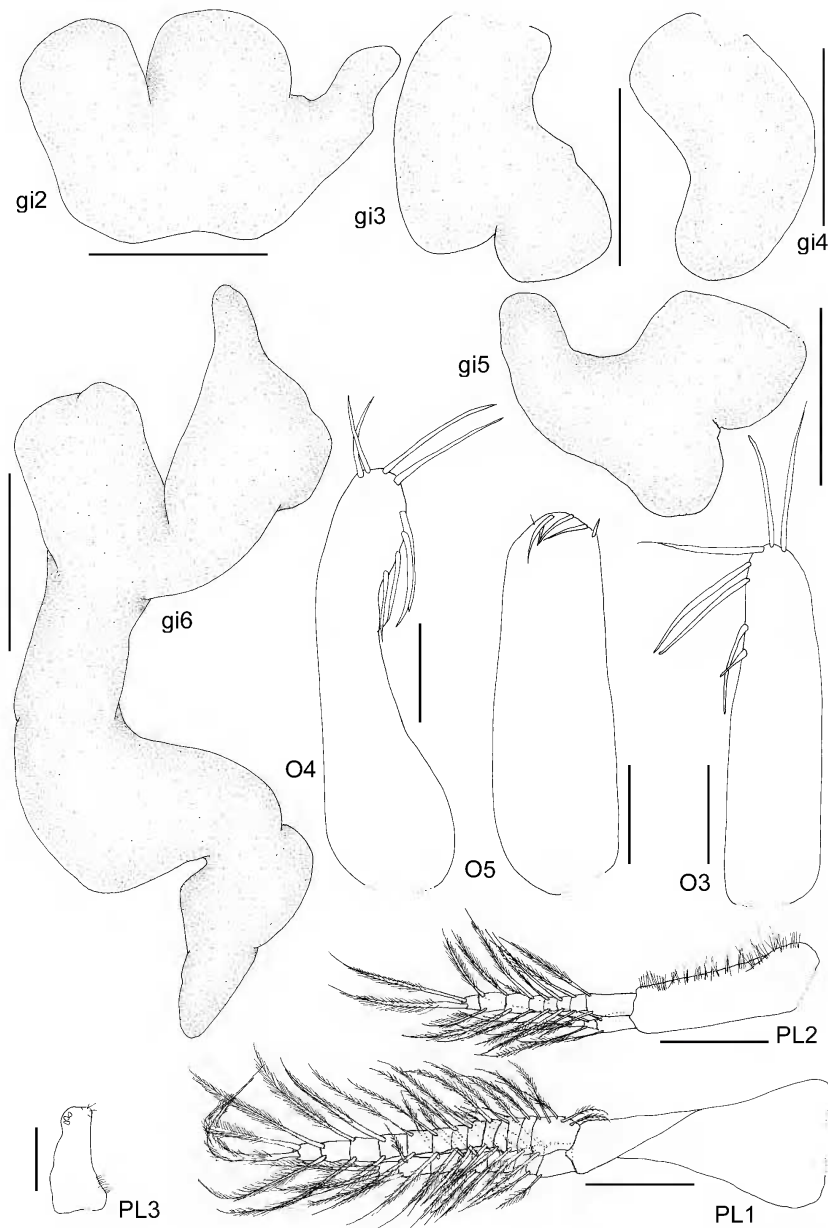


Fig. 25. *Arcitalitrus sylvaticus* (Haswell, 1879), neotype, female, 12.0 mm, AM P60950. Scales represent 0.5 mm for gills 2-6 and 0.2 mm for oostegites 2-5 and pleopods 1-3.

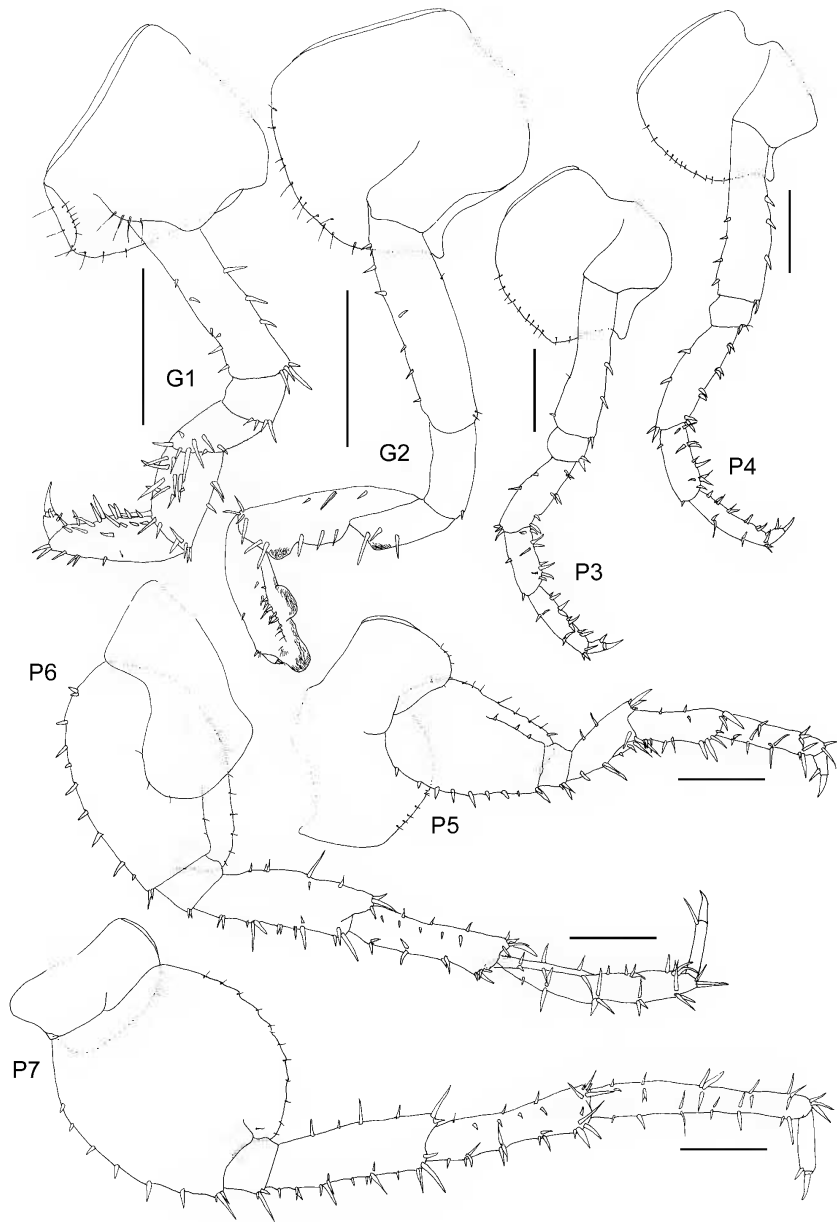


Fig. 26. *Arcitalitrus sylvaticus* (Haswell, 1879), neotype, female, 12.0 mm, AM P60950. Scales represent 0.5 mm.

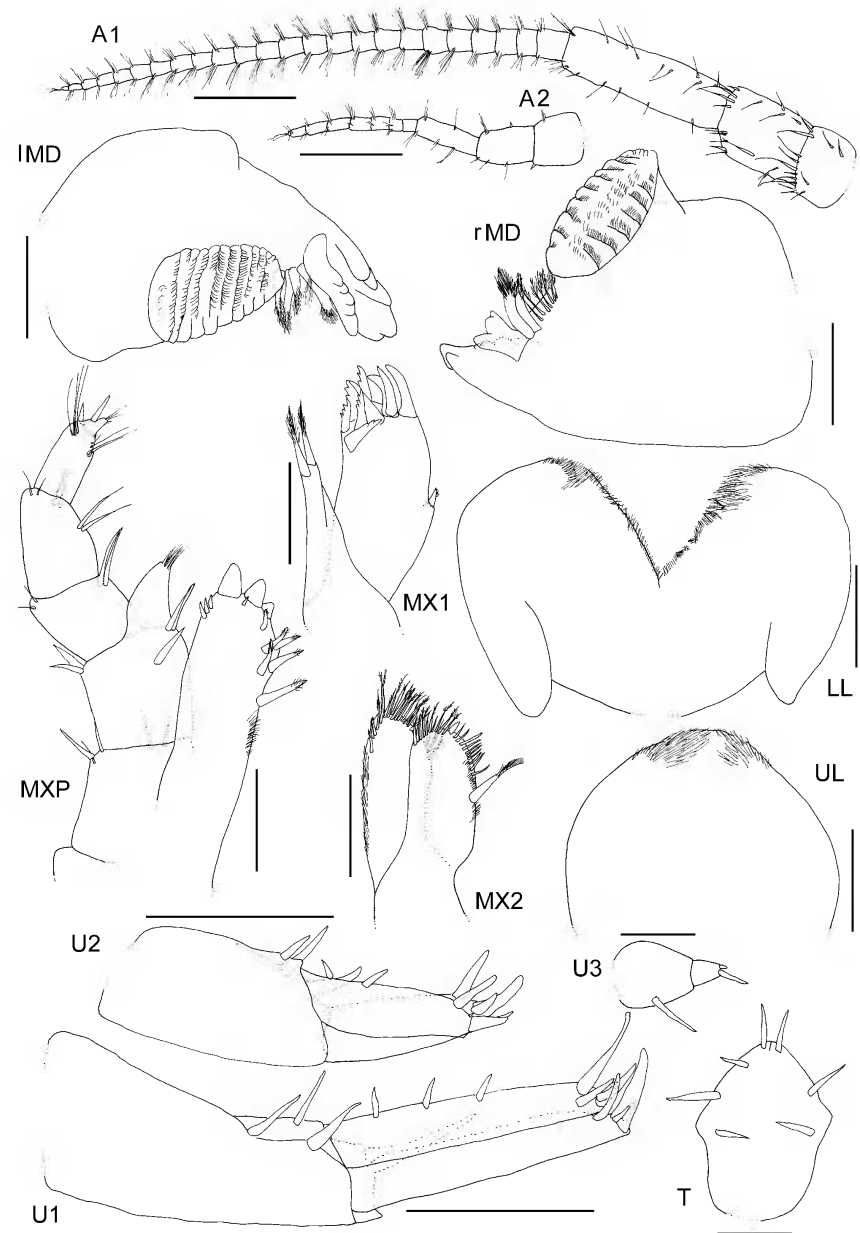


Fig. 27. *Arcitalitrus thora* n.sp., holotype, female, 13.0 mm, AM P60965. Scales represent 0.5 mm for antennae 1–2 and 0.2 mm for mouthparts, uropods 1–3 and telson.

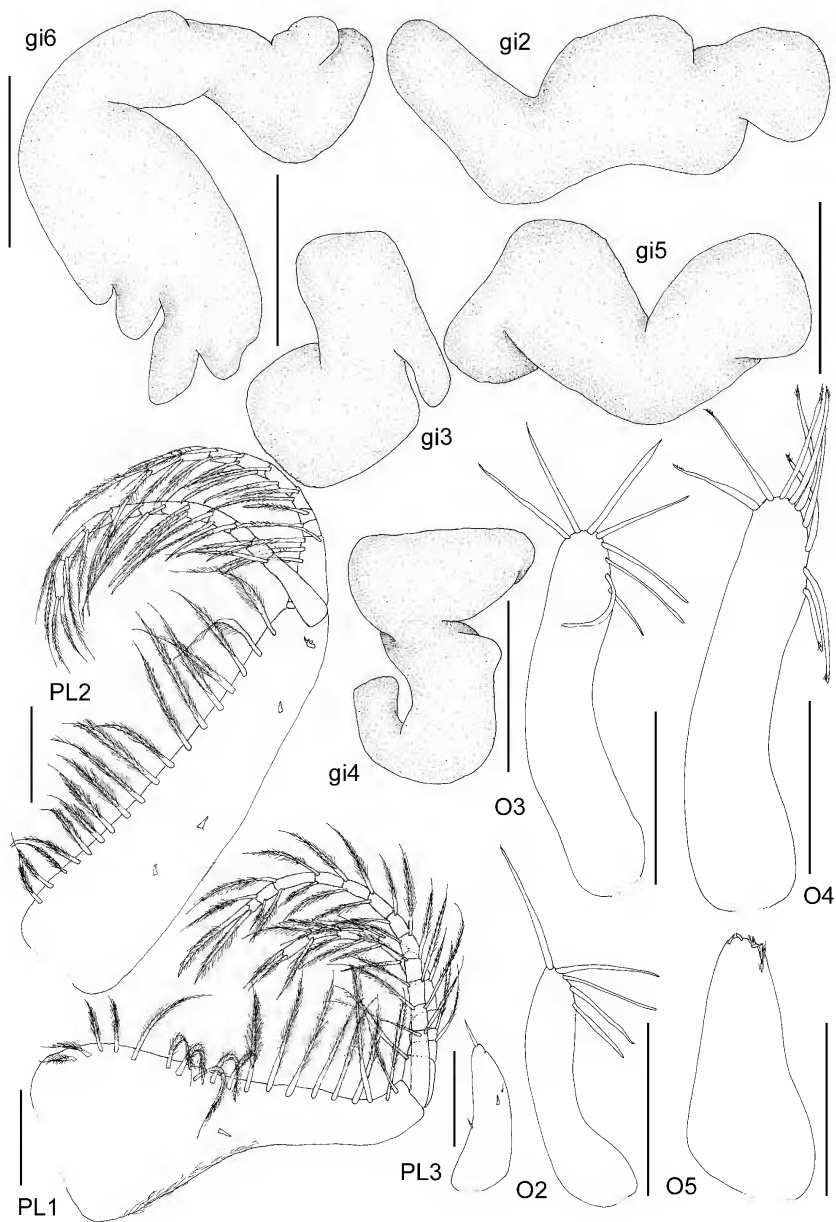


Fig. 28. *Arcitalitrus thora* n.sp., holotype, female, 13.0 mm, AM P60965. Scales represent 0.2 mm for pleopods 1–3 and 0.5 mm for all others.

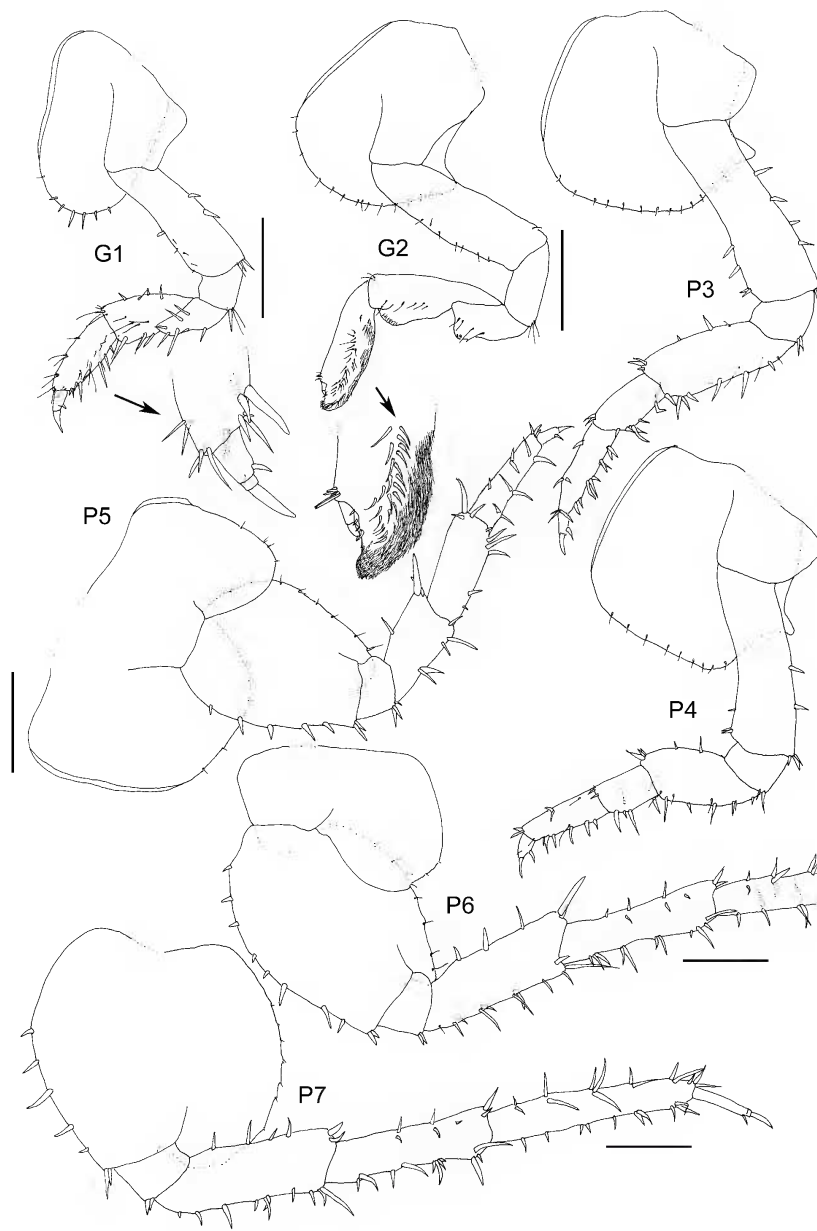


Fig. 29. *Arcitalitrus thora* n.sp., holotype, female, 13.0 mm, AM P60965. Scales represent 0.5 mm.